DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. XII. BOSTON, JANUARY, 1860. NO. 1.

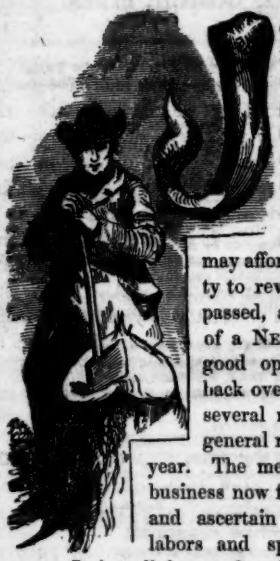
NOURSE, EATON & TOLMAN, Proprietors.
Office....34 Merchants' Row.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

CALENDAR FOR JANUARY.

"How dead the vegetable kingdom lies."



JOURNEYING along its silent course, another YEAR has gone, with its joys and sorrows, pleasures and pains, successes and failures. The beginning of each month may afford us an opportunity to review that which has passed, and the beginning of a NEW YEAR affords a good opportunity to look back over the reports of the several months, and take a general review of the entire year. The merchant and man of business now foot up their books, and ascertain the results of the labors and speculations of the year. It is well for us, that the journey of life is divided by stations and stopping-places, at which we may pause and take a retrospect of the ground over which we have passed. We may recall the difficulties we have often met, the dangers we have encountered, the pleasant passages we have had, the agreeable scenes by which we have been entertained, the cheerful companions who have accompanied us, the aids we have received—all the various incidents that have occurred to us. We may bring before our minds the instances in which we have done or felt wrong—have been hasty, or inconsiderate, or unwise, or have injured the feelings or interests of others. We may enjoy the satisfaction of reflection on what we have done that is kind, or benevolent, or good. We may look forward to the journey that is before us, and see how we may avoid the mistakes we have made, and the difficulties we have met with, and thus by a wise consideration, be enabled to pursue our future course with more pleasure and satisfaction than we have the past.

"Know thyself," is a maxim of so much importance to our happiness and success in life, that the ancients ascribed its origin to the gods. We cannot know ourselves without frequent and searching examinations of our outward and inward life—of our actions, and motives, and feelings. And when is there a better time for such examination than the present, when another year has passed away, and a new year is commencing?

When the mariner has completed his voyage, he takes his chart, and retraces his course to the point from which he sailed. He marks the course of the winds and currents, and observes the breakers and sunken rocks that he found in his way, and thus the experience of the past assists him in the future. Thus should we all do, both in our business affairs, and in our social and moral culture.

If we have failed in any of our plans, let us review the whole ground, and ascertain, if possible, to what circumstances the failure was due, that we may avoid a failure in future. If we have been successful, let us know to what circumstances success was owing, that we may achieve the same success hereafter. It is only in this way, that we can profit from our experience. For want of this retrospection, many hard-working men fail to learn anything from their experience. After many years of toil—of success and want of success, they have no more definite knowledge that may avail them as a guide, than they had when they commenced. It has been truly said that a man's experience does not depend upon the years he has lived, but upon the accurate observation he has made. A young man may have more experience than a man with grey hairs,—certainly he may have acquired more of that knowledge that will be of value to him in after life.

One great reason why farming is so uncertain in its results, is because men profit so little by their experience,—because they can make so few observations,—because they observe with so little accuracy,—and fail to record the results of their observations. Thus the experience of the past affords but little aid in the future.

The chemist has the records of the past before him. He records his own experiments, and their results, with the nicest accuracy, and can repeat them at his pleasure.

The astronomer records not only the results of his measurements and calculations, but every step of the calculations themselves, that they may be verified by others.

The physician records his observations upon diseases and remedies, and thus the physician of to-day has at his command, not only his own experience, but the experience of those who have lived before him. Man is the only being upon earth that profits by the experience of others. Animals of the present generation are no wiser than those of the past. They exhibit no more skill, no more sagacity, but blindly follow the same instincts that guided their predecessors.

Since the art of printing was invented, and the records of experience have been thereby greatly multiplied, men have rapidly improved in the knowledge of material things, and in the ability to use them for their advantage and convenience. What makes the difference between the educated and the uneducated man? The former adds to the knowledge acquired by the exercise of his own faculties, the knowledge possessed by those who lived before him, while the latter relies chiefly upon his own observations. But the educated man has not accomplished his whole mission until he has added his mite to the accumulated treasures of knowledge. Every good thought, every well-defined fact, adds something to the common stock, from which every one may draw according to his necessities and convenience.

If all the farm experience of the past season could be collected, and collated, and all that is valuable could be recorded, it would make a book of reference of great value. If the same thing could be done for a series of years, we should arrive at facts of inestimable value. The experience of years and generations past would be converted into guides and aids for the present. This would be a work of great labor and perseverance. But we will not despair—something is done towards its completion every year.

When Lieut. MAURY wished to determine the winds prevailing at any season in any direction of the ocean, he collated the log-books of hundreds of navigators, who, during a succession of years, had sailed over that section, and thus by immense labor, learned in what direction the winds blew, and on what days in the year, and thus, at length, arrived at the result, that certain winds prevailed in certain sections at certain seasons of the year. Thus facts were established of essential importance to commerce. The experience of the past was made to contribute to the advantage of the present. But if navigators had traversed the ocean without recording the course of the winds, the present generation of seamen would be no wiser in this respect than their predecessors, and would have continued to encounter the storms, and beat against the head winds at unfavorable seasons, as they did, all of which they are now able to avoid.

When the log-books of our farmers for a succession of years and seasons shall be carefully collated, and facts, established by the experience of hundreds, be placed on record, future agriculturists will be able to lay out their course with more confidence, and with more certainty of reaching the results at which they aim. Our agricultural papers, the books of our county and State societies, and our boards of agriculture, afford the means of making the record, and we may hope that some *Maury* will one day arise, and condense from the experience of the past a book of wisdom, that shall be of as much value to agriculture as the charts of the winds are to navigation.

Something like this, it seems to us, should occasionally be the current of the farmer's thoughts during the month of JANUARY. And if it is so, it will not fail to be of more substantial benefit to him, and to secure more favorable results in the item of profits, than many days of anxious toil, guided less by wisdom and the light of experience.

AN EXPERIMENT FOR THE COUNTY SOCIETIES.

COMMONWEALTH OF MASSACHUSETTS—AGRICULTURAL DEPARTMENT.

Boston, December 5, 1859.

At a meeting of the State Board of Agriculture, held on the 1st inst., it was

"*Voted*, That the several Agricultural Societies receiving the bounty of the State be required to offer three premiums for the most thorough, exact and reliable experiments upon the proper depth of applying manures, payable in the fall of 1862, as follows:—

"Select a level piece of land of any convenient size, from twenty square rods up to as many acres or more, which should be as nearly equal in its character and conditions as possible. Divide it into five equal parts, numbering them 1, 2, 3, 4 and 5, for a rotation of three years.

"Divide the manure which it is proposed to apply, and which should be of a uniform character, into four equal parts. At the time of first plowing in the spring, spread evenly one-fourth of the manure upon plot No. 1, and then plow the whole field of an equal depth. Apply another fourth part of the manure to plot No. 2, and then cross

plow the whole field to about half the depth of the first plowing. Spread another fourth of the manure upon plot No. 3, and harrow or cultivate the whole field; after which sow or plant the whole evenly, with any crop preferred. Finally, spread the remaining quarter-part of the manure upon plot No. 4.

"Observe that by pursuing this course, each of the five lots will receive equally, a deep plowing, a shallow plowing, and a harrowing or cultivating, the only difference in them being that in No. 1 the manure is buried deep, in No. 2 shallow, in No. 3 buried only slightly, but coated with loam, and in No. 4 left exposed upon the surface; while No. 5 gets no manure. The manure is to be spread broadcast and as evenly as possible. The after cultivation should be the same on each of the lots, and the harvest of each should take place at the same time.

"Let a statement of the character of the soil, whether light or heavy, dry or moist, leachy or retentive of manures, the crop of 1859, kind and amount and mode of application of manure in 1859, size of field covered by the experiment, depth of first plowing, kind and amount of manure used in 1860, kind of crop, when and how sown, number of times and manner cultivated, and weight of product on an average rod of each plot, be made in 1860, and returned in the annual report of each Society.

"If there is a double product, as grain and straw, corn and stover, let the weight of the secondary product be given on each plot.

"If the competitor weigh the whole crop instead of estimating it by an average rod, there will be no objection to such a course.

"A brief synopsis of the weather, for each of the following months, by dividing each month into three parts, and using the terms dry, moist, and wet, to indicate the general character of the weather, will also be expected.

	First Third.	Middle Third.	Last Third.
May,			
June,			
July,			
August,			
September,			

"A similar report of all the above items, except the nature of the soil, will be made in 1861, and in 1862, when the premiums will be awarded. No manure is to be applied to the second and third crop."

"*Voted*, That the Secretary of the Board be requested to offer premiums which will secure an adequate comsensation for the time and labor consumed in the experiment."

I hereby notify your Society of the above vote. Evidence of a compliance with it will be required before I shall feel authorized to draw a certificate for the bounty to any Society.

One of the greatest obstacles in the way of agricultural progress is the difficulty of obtaining reliable facts and statistics as a basis upon which to establish principles and construct theories. As a general rule, theories are first advanced, and then isolated facts are brought forward for the purpose of proving their truthfulness. It is true that agriculture is not, in the usual sense of the term, and probably never will become, one of the exact sciences; yet there are many things connected with it which ought to be taken out of the region of conjecture, and placed, by repeated and multiplied experiments, upon a more substantial basis. A single fact or experiment may be of only trifling value in itself considered, but when added to scores or hundreds of others, the whole collectively may elucidate a doubtful point, or settle a vexed question.

With these considerations in view, the Board asks and requires the attention of every Society in the State, to render any aid in the solution of the question here considered, and to act in concert with it, and with each other, in such a way as to give to the result the greatest possible practical and scientific value. I would suggest that the rotation be limited to corn, grain and grass.

Allow me to call your attention to the Act of 1859, ch. 232, sections 1, 2 and 3, and especially to sections 4 and 5, authorizing the Board to make the above requirement, and the penalty of a disregard of, or a failure to comply with it.

I would simply suggest that premiums of $25, $20, and $15, have been offered by some of the Societies, and that it is desirable that no offers should be smaller than these amounts, as the object above indicated is to induce a multiplicity of experiments.

CHARLES L. FLINT,
Sec. State Board of Agriculture.

For the New England Farmer.

A WET MEADOW.

I wish to ask through the *Farmer* in regard to a bay meadow that I have. It contains about five acres, and the muck, ten feet from the shore, is about eight feet deep; in the centre I have never found any bottom. I have dug down eight feet, and then run a pole down ten feet, and not found the bottom. I have dug a ditch through the centre of it, and several side ditches, five feet wide and eight feet deep. But on account of a meadow below, I cannot drain it but about eight inches from the top, where the water stands all the time.

About three years ago, I took a piece of it, and cut the top all off, and put on sand, two inches deep, and then put on a top-dressing, and sowed on herds grass seed in August, and since I have had great grass. But the bogs are growing up again, and I don't know what to do with it. The muck is the finest I ever saw. I had to wheel on all the sand, as no team can go on to it. Will some one tell me, through the *Farmer*, how to manage this meadow? How will cranberries do on it? How shall I fix it for them?

West Townsend, Mass., 1859.

REMARKS.—You must drain more thoroughly, and then you can make a garden of such a meadow. If those owning land below, prevent your draining, call the laws of the Commonwealth to your aid. See Act on Draining, chapter 104, 1855, entitled an Act to authorize the making of Roads and Drains, in certain cases.

BRINE POISONOUS TO ANIMALS.—The *Kentucky Turf Register* says a gentleman at Lawrenceburg, Indiana, recently emptied brine from a pork barrel into the yard. A number of hogs and one horse partook of it. In less than six hours the horse and seven hogs were dead.

For the New England Farmer.

IS FARMING PROFITABLE?

It is not always considered the province of a "farmer's paper" to afford amusement as well as instruction. There is a sort of gravity in the record of crops and the manner of producing them, which, if it does not absolutely preclude the idea of a joke, leaves us very uncertain as to the proper place for it to come in. But your correspondent "Pinkham," of Chelmsford, has put to rest all doubt upon the subject, so far as he is concerned. That gentleman, in the *Farmer* of November 12, undertakes to show that the business of farming- some branches of it, at least—don't pay; and by an array of figures, apparently satisfies himself, at least, that his position is a true one. He first takes up the good old crop of Indian corn, and insists that it brings the farmer who raises it into debt at the rate of ten dollars per acre; and very naturally wishes to know how long at that rate, it will take the farmer to get rich. I have known cases of this kind of arithmetic before. I knew a farmer once who insisted that he could buy his pork a great deal cheaper than he could fatten it; that he could purchase his corn a great deal cheaper than he could raise it; that all his crops, in fact, cost a great deal more than they came to. It did not take many years for the sheriff to set his stakes around that man's farm.

But let us examine some of Mr. Pinkham's figures. All his items, for the mere labor of cultivating an acre of corn, count up to $26, and besides he adds $3 for interest and taxes on land, $3 for fencing, &c., $5 for shelling and marketing, and $10 for the manure; making in all $47 per acre. He then credits 30 bushels of market corn, $2 worth of soft corn, and $5 for pumpkins and stover. and strikes a balance of $10 against the crop.

Now I undertake to say that the farmer who expends more than $15 worth of labor on an acre of corn, reckoning the use of his teams and implements of all kinds, don't know anything about farming. The value of the manure is perhaps set low enough at $10 per acre; but then it ought to be considered that not more than half of this manure becomes exhausted in a single year, and that at least $5 ought to be credited towards the manuring of the next year's crop. I admit that the labor and manure for an acre of corn may with safety be put down at $20 to $25. As to the shelling and marketing, the good farmer ought to shell his corn during the winter evenings, instead of playing checkers at the nearest grocery; and so far from being obliged to go to market with his corn, his neighbors will take it at his door, at good prices, and thank him besides. Good northern yellow corn is not one of the articles which go a begging.

Then let us look at the crop itself. Mr. P. puts it down at 30 bushels to the acre. I undertake to say that any land, which, taking one season with another, under the pressure of ten loads of manure, will not average 40 bushels to the acre, is very poor corn land, and not worth $40 per acre, or anything like it. I do not consider 50 bushels to the acre a great crop. The best acre of corn I ever saw, was in Castleton, Vt., some 35 years ago, which drew a premium at the agricultural fair on the basis of 131 bushels to the acre. But call 40 bushels a fair average, and we have, according to Mr. P.'s figures, $40 for the crop. Then the stover and pumpkins which he sets down at $5, I call worth at least $10. The stover of an acre of good corn is worth as much for cattle in the winter as a ton of good hay—to say nothing of the pumpkins, which, I admit, are usually of no very great account, though in some seasons they add something to the general value of the crop.

Now it is plain that Mr. Pinkham and myself do not agree. He makes the corn crop $10 worse than nothing per acre, while I figure out a profit of $25; a difference of $35 per acre. It is hardly necessary to say that both of these estimates cannot be correct. But I honestly believe, that, at the worst aspect of the case, the truth cannot go back from *my* estimate so as to meet *his*, half way. I have long considered the corn crop as not only one of the most profitable, but an indispensable one for New England. It is a crop that does not fail, on an average, once in twenty years. It leaves the soil in better condition for future tilth than any other crop. It adds largely to the farmer's means of keeping stock. It forms one of the cheapest and healthiest portions of our food. It may be used in more forms and for more purposes than any other grain. Such being its importance in all its aspects, I regret to see anything in print calculated to discourage the farmers of New England in raising it.

I may hereafter have something to say about Mr. Pinkham's estimate of the cost of raising stock. I only wait to see whether he has found any item of farming that *is* profitable.

Somerville. E. C. P.

For the New England Farmer

HOW I RAISE BRONZE TURKEYS.

My first object is to secure large, strong and well-formed birds. I prefer a male bird that has seen two winters, and weighs not less than 30 pounds. The last season I used one of 39 pounds. I prefer old hens; for although the young hens lay earlier, yet the young of the old hens are larger and stronger. I prefer hens of from 15 to 20 pounds in weight; when the time for laying approaches, I take flour barrels with one head out, lay them on the side, prepare a nest in the barrel composed of leaves, with a few tobacco stems to keep the lice away, cover the barrels with a few brush, put a hen's egg in each nest, and leave the turkeys to deposite their own, which they usually do. I remove the eggs each day until the turkey inclines to set, when I give her 20 eggs, from which I usually get from 18 to 20 young. Close the barrel each night with a piece of lattice work made of laths, to prevent the entrance of night-walkers.

The first day of hatching I do not allow the mother to leave the nest, or feed the young. On the second day, instead of cooping the mother, I prepare a pen for the young, by nailing boards on to four short pieces of slit work, so as to make a pen about 15 feet square and 18 inches high; this can be easily moved to a new spot, as it should be in warm weather, as often as once a week, or the turkeys will become sickly. For the first week I feed mostly on boiled egg, boiled hard and chopped fine enough for them to swallow, with now and then a meal of fish worms, cut or broken into small pieces. Nothing gives them more strength,

or makes them grow so fast, as fish worms. After the first week, I feed on curd, made of thick, sour milk, and on corn meal, ground coarse as for hominy, and wet with thick, sour milk, to which I add a very little coarse sand, to prevent crop-bake, with which many young turkeys die when fed on meal without it.

As soon as the young ones are able to fly over the side of their pen, I allow them, in good weather, to range with the mother, and feed on insects, —if these are scarce, I feed a little, night and morning, until they are more plenty—but grasshoppers give most bone. Buckwheat I have found the best *grain* to give size. If the weather is stormy while turkeys are young, I drive them under a shed, or into the barn cellar, the floor of which is covered with fine litter. If any get chilled, cover them with cotton and place them by the stove, and put down a few fish worms, and they are soon smart again. With this method I have succeeded in raising turkeys, while others have lost theirs—even during the last cold and wet season. With this treatment, an old Java hen, at one brood, gave me 17 fine turkeys, but a hen turkey did better still. I have never had a turkey have the gapes, or any other disease. H. S. RAMSDELL.

West Thompson, Conn., Nov., 1859.

JOHN CHINAMAN AS AN AGRICULTURIST.

In the eyes of the Chinese, human excrements constitute the true substance of the soil, (so Davis, Fortune, Hedde, and others tell us,) and it is principally to this most energetic agent that they ascribe the activity and fertility of the earth.

Except the trade in grain, and in articles of food, generally, there is none so extensively carried on in China as that in human excrements. Long, clumsy boats, which traverse the street canals, collect these matters every day, and distribute them over the country. Every Coolie, who has brought his produce to market in the morning, carries home at night two pails full of this manure on a bamboo pole.

The estimation in which it is held is so great, that everybody knows the amount of excrements voided per man, in a day, month or year; and a Chinese would regard as a gross breach of manners the departure from his house of a guest, who neglects to let him have that advantage, to which he deems himself justly entitled, in return for his hospitality.

In the vicinity of large towns, these excrements are converted into poudrette, which is then sent to the most distant places, in the shape of square cakes, like bricks. For use, these cakes are soaked in water, and applied in the fluid form. With the exception of his rice fields, the Chinese does not manure the field, but the plant.

Every substance derived from plants and animals is carefully collected by the Chinese, and converted into manure. Oil cakes, horn and bones are highly valued; and so is soot, and more especially ashes. To give some notions of the value set by them on human offal, it will be sufficient to mention that the barbers most carefully collect and sell, as an article of trade, the somewhat considerable amount of hair of the beards and heads of the hundreds of millions of customers, whom they daily shave. The Chinese know the action of gypsum and lime; and it often happens that they renew the plastering of the kitchens, for the purpose of making use of the old matter for manure.

No Chinese farmer ever sows a seed of corn before it has been soaked in liquid manure diluted with water, and has begun to germinate; and experience has taught him, (so he asserts,) that this operation not only tends to promote the growth and development of the plant, but also to protect the seed from the insects hidden in the ground.

During the summer months, all kinds of vegetable refuse are mixed with turf, straw, grass, peat, weeds and earth, collected into heaps, and when quite dry, set on fire; after several days of slow combustion the entire mass is converted into a kind of black earth. This compost is only employed for the manuring of seeds. When seed time arrives, one man makes holes in the ground; another follows with the seed, which he places in the holes; and a third adds the black earth. The young seed, planted in this manner, grows with such extraordinary vigor that it is thereby enabled to push its rootlets through the hard, solid soil, and to collect its mineral constituents.

The Chinese farmer sows his wheat, after the grains have been soaked in liquid manure, quite close, in seed beds, and afterwards transplants it. Occasionally, also, the soaked grains are immediately sown in the field properly prepared for their reception, at an interval of four inches from each other. The time of transplanting is towards the month of December. In March the seed sends up from seven to nine stalks with ears, but the straw is shorter than with us. I have been told that wheat yields 120 fold more, which amply repays the care and labor bestowed upon it.

It is quite true that what suits one people may not on that account suit all countries and all nations; but one great and incontrovertible truth may, at all events, be learned from Chinese agriculture, viz., that the fields of the Chinese cultivator have preserved their fertility unimpaired and in continued vigor ever since the days of Abraham, and of the building of the first pyramid in Egypt.* This result, we also learn, has been attained solely and simply by the restitution to the soil of the mineral constituents removed in the produce; or what amounts to the same thing, that this has been effected by the aid of a manure, of which the greater portion is lost to the land in the system of European (and American?) cultivation. —*Liebig's Modern Agriculture.*

* Vessels of Chinese porcelain are found in the pyramids, of the same shape, and with the same characters of writing on them, as on modern China at the present day.

For the New England Farmer.

MARKET DAY IN ESSEX COUNTY.

MESSRS. EDITORS:—The last "market day" of the season came off yesterday, with good success, if a multitude of animals and a multitude of farmers, gathered together, are to be taken as evidence of the fact. How many bought, and how many sold, I cannot say; but this I can say, there was a good opportunity to do both, and so far as I understood the murmurs of the crowd, it was done to a considerable extent. The great oxen from New Hampshire were there. Every one who examined them, expressed their admiration of the

symmetry of their forms, and the brightness of their looks. The one partly Durham was most admired. Whether their weight was 6500 or 7000 pounds, I cannot say; their keeper was rather shy of scales. At all events, they were big enough, and fat enough, to rejoice the hearts of many on a Thanksgiving day, provided all the turkeys had run off, and there should be no *extended liquor around*, and no *little man to extend it*.

As "line upon line" and "precept upon precept" have ever been helpers in a good cause, I send you such views as have occurred to my mind in relation to underdraining—in the course of somewhat extended observations, on some of the best conducted farms in our county the past season. The motto of our farmers is, "Make the best of what you have." If a man can, by an expenditure of fifty dollars per acre, make his lands produce two, three, or four times as much, as without such expenditure, this I reckon good economy. I can point out many instances, within a few miles distance, where this has been done, and I trust there are many other fields where it will be done.

Truly yours, J. W. P.

South Danvers, Nov. 16, 1859.

For the New England Farmer

FRENCH'S FARM DRAINAGE.

With a simple "please accept," I received some time since a copy of this work from the editor of the *Farmer*. It was an acceptable present; although it suggested the thought that I was indebted for the gift rather to Gov. Brown's personal knowledge of the "thorough drainage" of my purse, than to any successful experiments in the application of the system to my land.

I have read the book carefully; "read, not to contradict and refute, nor to believe and take for granted, but to weigh and consider." I do not propose to attempt a "review" of the work. This has been done by abler pens. I wish simply to give expression to a few thoughts which its perusal has suggested to my mind. And if, in doing so, I shall indulge in a little fault-finding, I think it will be gratifying to the author, by way of variety; for, so far as I have seen, the numerous "notices" of his book have been of unmixed commendation and praise.

As I have not the vanity to suppose that my opinions are entitled to a very conspicuous position among the practical suggestions of your correspondents, I propose to write a few short articles, that may be put into any spare corner of your pages, on some of the many topics discussed in the "Farm Drainage;" and will begin with the

ANTIQUITY OF DRAINAGE.

After a brief introductory chapter, our author enters upon the "History of the Art of Draining" with the following opening sentence:

> "The art of removing superfluous water from land must be as ancient as the art of cultivation; and from the time when Noah and his family anxiously watched the subsiding of the waters into their appropriate channels, to the present, men must have felt the ill effects of too much water, and adopted means more or less effective to remove it." p. 24.

I must confess to great veneration for antiquity. I believe there is much truth in the declaration that "there is nothing new under the sun," notwithstanding the many "new" inventions of our progressive age. The question of the antiquity of drainage is, therefore, to my mind, a most important one. For if farmers in other times, and in circumstances similar to our own, have found draining necessary, then may we reasonably conclude that eventually we shall be obliged to pursue the same course.

The Bible contains frequent allusions to agriculture, during some four thousand years of man's occupation of the soil, in countries where "thou sowest thy seed, and waterest it with thy foot," as well as in those "of hills and valleys that drinketh water of the rain of heaven," and as a part of that history, which is philosophy teaching by example, is, I think, very properly alluded to by our author in this connection; however some may be disposed to smile at the idea of a Bible argument on draining.

His specific allusion to the Flood naturally directed my attention to the Mosaic account of that event. We are told that on the first day of the first month of the 601st year of Noah's age, he removed the covering of the ark, and looked, and behold the *face* of the ground was dry. Nearly two months longer did the "anxious" voyagers remain in the ark. The "water of drainage" was still in the soil. Impatiently may we suppose they watched the slow process of its removal. Finally, in the second month, on the seven-and-twentieth day of the month, *was the earth dried*—"thoroughly drained." Noah came forth from the ark, and the Almighty covenanted with him, "neither shall there any more be a flood to destroy the earth."

Turning over a single leaf of the sacred record, we find, in the account of Lot's separation from Abram, that the plain of Jordan was chosen—not because it was thoroughly drained, not because the ill effects of too much water did not happen to be felt there, but simply because "*it was well watered everywhere.*" And from Genesis to the parable of our Saviour, in which the seed of the sower "withered away because it lacked moisture," frequent references are made to ill effects of drouth, but, so far as I am aware, not a solitary one to "the ill effects of too much water."

As a curse, it is said "the rebellious dwell in a *dry land*;" and as a reward to the righteous, "he shall be like a tree planted by the rivers of water." It is promised that "he that watereth, shall himself be watered;" but nowhere except in some new translation that I have not seen, is it said, "he that draineth, shall himself be drained."

In relation to the writings of "Cato, Columella and Pliny," who, our author informs us, mention draining, I can say nothing, because I have never seen their works. In this connection, however, I will allude to a statement, which I saw not long since in a newspaper, to the effect that the Emperor Napoleon had returned from his Italian campaign an enthusiastic advocate of irrigation.

That the agriculture of the Chinese furnishes little evidence of the antiquity of draining may be inferred from the fact that, among a set of models of Chinese agricultural implements now in the Museum of this State, there is not a single one adapted to any of the processes of draining, while two of the most expensive and complicated are machines for irrigation.

But all this argument was scarcely necessary, on my part. The chapter which thus opens with the assertion that draining must be as old as the art

of cultivation, is only half written when the confesion is made that James Smith, who "came into general notice about 1832, seems to be in fact, the first advocate of any system worthy the name of thorough drainage." (p. 37.)

This leaves the subject of drainage where, in my opinion, it belongs—among the unsettled theories of our own peculiarly theoretic age. S. P.

Winchester, Nov., 1859.

CARE OF OLD APPLE TREES.

Many farmers who have old apple orchards are neglecting them, and in many cases cutting them down, to make room for young trees. This is poor policy, to say the least. Old trees, by the exercise of a little care and skill in managing them, may be made almost as productive as young ones, and in a much shorter time. All that is essentially requisite to ensure this result, is to trim them carefully cutting away all the diseased and broken limbs, and to free the trunks and larger limbs of the "scurf" and moss, and afterwards to insert grafts—care at the same time being taken to lighten the soil, and make it rich, especially in the vicinity of the roots. In renewing an old orchard something like the following course may be advantageously pursued—the proprietor having first examined the trees, and decided whether they have sufficient vitality to renew their former energy under proper treatment.

In April or May we should remove the rough bark from the body and large limbs of the trees with a scraper, an implement like those used by boat-builders in removing the rosin from the seams of boats and vessels, and afterwards scour the entire surface with a mixture of sharp sand and ashes, mixed with soap and water. Every limb should be treated in the same way, whether large or small, that can be come at conveniently, and care taken that all the moss and rough bark is removed.

The trimming should not be undertaken until about the middle of June, when all crooked and diseased wood should be removed with the sharpest tools, reserving only such shoots and small limbs as are of suitable size to graft. If the trees are old and very much decayed, the number retained for this purpose should be small, as there may possibly not be enough energy or vital power in the system to sustain a large number, and as too dense a top will necessarily tend to abridge the recuperative action by producing too much shade.

The soil should also be thoroughly loosened around the roots, and filled with strong and invigorating manure, and kept entirely free from weeds and grass. The best stimulus, probably, that can be applied, is a compost made of forest leaves, well decomposed, house ashes, lime, gypsum and common stable manure. From fifteen to twenty bushels of this should be allowed to every large tree, and so worked into and incorporated with the soil as to ensure its coming in close contact with the roots. If the soil be of a light arenaceous, or sandy texture, a load of fine clay should be spread over the surface, above the manure.

In removing the limbs, all the stumps should be coated with wax or tar softened with tallow, or what is equally cheap and more easily applied, gum shellac dissolved in alcohol. The reason why so many old trees perish after the abscission of the larger limbs, is, that no care is taken to ensure the healing of the wounds, which let out the life-blood and energy of the system during the ascent of the sap, leaving long, black lines of decaying bark as a perpetual reproach to the unskilful or perverse manager.

The second year the trees may be grafted, and if the tops promise not to be thick enough, new branches may be permitted to start, to be engrafted subsequently, and in such places as will ensure a symmetrical and desirable form to the tops. The most eligible shape for an apple tree is that of an umbrella reversed; but this must be a matter of taste with most persons.

So far as working the soil and manuring is concerned, our method refers to trees standing by themselves; where they are regularly set in orchard form, the best way would be to plow the whole surface carefully and manure broadcast.

This course may seem too precise and expensive to some persons,—but if so, let them try the cleansing, pruning and manuring process on a single declining tree that they have long valued, and see what a wonderful restoration will be effected.

For the New England Farmer

PROFIT OF FARMING.

I notice a piece in your paper of Nov. 12th, 1859, headed, "How to reckon the Cost of Farm Products," and signed T. J. Pinkham, Chelmsford, 1859. Mr. P. gives us a very particular statement of the cost of raising, and the value of one acre of corn in dollars and cents, which statement I am not disposed to find fault with; but am disposed to take it as it stands. I would only simply remark, that in Chelmsford, and its surrounding towns, where it is known that a farmer has any corn of his own raising to sell, instead of soliciting purchasers, he will have five times as many call on him as he can supply; this shows that a shilling a bushel is rather a high price to charge for shelling and selling corn; but still I am willing to take all his figures, just as they are, and thank friend Pinkham for his close and fair calculation. It is just what I have been hoping some one would do, and hope we will still have more statements of the same nature, from those who are disposed to believe there is no profit in farming. But I think his story will leave this subject as it is. I think it would have a tendency to lead young men who are now thinking what they shall do for a living into a great error. There are two

sides to every thing. His estimated cost of plowing is fair, and sufficient for plowing an acre of old pasture, trodden by the cows for years. If this was the kind of land, I will still add a little more experience to it. At the last hoeing of the corn, charge fifty cents for a half-bushel of rye, seventy-five cents for a bushel of red top seed, and twenty-five cents for sowing it over the ground, thus increasing the loss to $11,50.

After having been cultivated through the season, according to the writer's account, what farmer, who has his senses, when the sun shines on this acre of land in 1860, with the grass and rye then growing upon it, will not say that this acre of land is worth double what it was on the morning of the tenth day of May, 1859, before the plow broke the sod? I will suppose this acre of land to be an acre of hay land, run down so as to need plowing, which we cannot suppose bore more than ten hundred to the acre. Is it not reasonable to suppose if this ground is sown down to barley and grass seed, that it will, for years, produce one ton to the acre? And cannot any man buying standing grass, afford to pay as much for one ton of grass standing on an acre of ground, lately plowed, as he can for a ton and a half, where he has to swing the scythe and the rake over three acres of ground to collect the hay of a poorer quality?

Whether the acre of land the writer speaks of was intended to be improved for pasture or mowing land, it is plain to be seen that the cultivation of the ground, while the corn crop was growing, rendered it capable of producing double its former value of grass for years to come. And this gives the profits in farming.

Although he did not tell us in words, that there was a profit in farming, he came so near it, he unlocked the door, and made it very easy to swing open and let us look in. Go on, friend Pinkham; give us more statements, remembering that agriculture is so much like pure old gold and silver, that it will continue to shine as long as you continue to scour it, and a long time after. But if you should ever be able to convince me that there is no profit in farming, you will give me more anxiety, and cause in me more alarm, fearing that the world will come to an end by starvation, than Miller's preaching, and all his followers, ever did!

ASA G. SHELDON.

Wilmington, Mass., Nov. 14.

EXTRACTS AND REPLIES.

HOW TO MAKE AN OBSTINATE HORSE DRAW.

In looking over the last number of your paper, (Nov. 12,) my eye fell upon an article taken from the *Cotton Planter*, entitled "To make an obstinate horse pull." In reading it, it brought to my mind an instance of Yankee ingenuity used for the same purpose, although of a different kind or contrivance, and of which a friend of mine was an eye-witness, winter before last, in Northern Vermont. As it is fully as infallible a method to make such a horse pull, as the other, and as it may be of use to many of your subscribers in a similar case, I give it to you, as follows.

As my friend was riding along one day on horseback, he saw two men, each with a heavy load of wood upon his sled. One of the horses of the team behind becoming very obstinate, a variety of ways were tried to make him draw, but without avail. He would pull backwards so as to prevent the other horse from drawing. After coaxing, whipping, &c., in vain, the following method was very successfully tried. A stout rope was made fast to the obstinate animal's tail, and then passed under his belly in such a way as to pass between both the hind and the fore legs, and the other end was made fast to the front team. When all was ready, the horses of the front team were started, and no horse, I will venture to say, ever pulled better. Let others try the same method, and they may be assured, that if it does not work successfully, it is because the animal does not care enough for his tail, to follow it. A VERMONTER.

Burlington, Vt., 1859.

FOWL MEADOW GRASS.

MESSRS. EDITORS:—When I was a boy, in my native town, Lancaster, Worcester County, there was a tract of land lying on both sides of the Nashua River, which had never been cleared, offered for sale, which my father bought. A large portion of the estate was pine plain. He hired help to cut off the lumber, and to clear the alders from the interval. There were large pieces of native grass he mowed. He did not know the name. I remember one of his hands said it was the same as a kind he mowed in "Fowl Meadow." They called it Fowl Meadow grass, so named from a very remarkable bird found dead there. None knew its name, or place, or kind. I never knew it cultivated till I reaped off the heads and sowed some fifty-six years ago, which I have often done since, sometimes quite successfully. I have never had it do well, mixed with other kinds of grass seed, or sown in spring or upland. But sown on the surface of a burnt damp soil, it does admirably. It will not run out, if cut late. I will not say that early cutting kills it, or that it requires the annual dropping of ripe seed, but, as requested, give my experience. BENJAMIN WILLARD.

Holyoke, Nov. 14, 1859.

A CARROT CROP.

I have cultivated this year a small piece of land to carrots which has been sown to the same crop for the two years previous. It is three rods wide, and seven rods long, making 21 rods of ground. The carrots were sown about the middle of May, and where the carrots missed, I set turnips, thinned and hoed three times, at the cost of about three dollars, and on the 24th and 25th of October, dug and housed 102 bushels of carrots and 20 bushels of turnips. H. H.

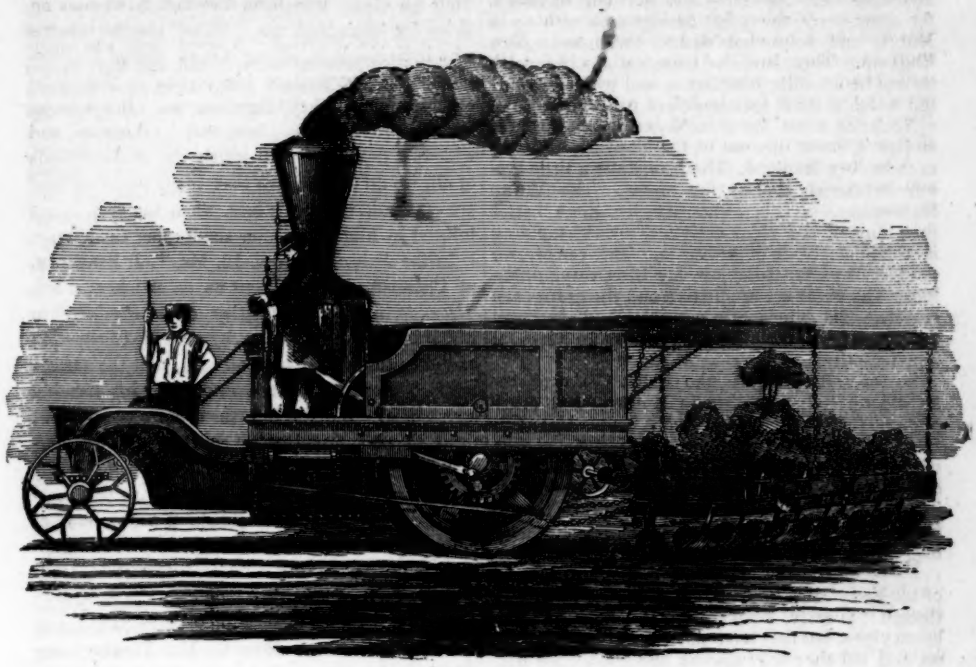
Clarendon, Vt., Nov., 1859.

MUST AN OWNER FENCE HIS LAND?

A reader of the *Farmer* would like to inquire through its columns, if there is any law he can enforce so as to make a neighbor build half of the fence against his woodland? INQUIRER.

Milford, Mass., 1859.

REMARKS.—An owner *must* keep up his half of the fence as long as he improves the land. If he desires to let it lie in common, he must give six months notice to *all* adjoining occupants. See Revised Statutes, Chap. 19, Sect. 2, and same chapter, latter part of Section 15.



J. M. FAWKES'S STEAM PLOWING MACHINE.

We present the reader, to-day, with an engraving of the first Steam Plow, we believe, that has been put into practical operation in this country. We do this, more with a view to keep the reader acquainted with what is going on in the world of agricultural machinery, than with any expectation that it will be adopted in New England during the present century. It is probable that its use cannot be made profitable except on extensive tracts of clear and pretty level land, or on large estates owned by individuals, that have been brought under a high state of cultivation.

In the recent trial at the U. S. Fair in Illinois, it was said that its ease of motion, the facility with which it may be turned, and the manner in which the plows may be controlled, all commend it to the consideration of a discriminating public, and its successful and extraordinary performance upon proper soils have elicited the highest commendation and praise. It will not answer upon stumpy ground, or in any other in which the plows will be constantly meeting obstructions which require them to yield or break. On a large portion of our farming-lands, especially on our western prairies, however, this machine seems destined to be of very important and immense service, furnishing, according to the estimate of the committee of the Illinois State Fair, the means of doing this work for one-fourth of its present expense.

The illustration of this machine, given above, was kindly furnished us by Mr. FAWKES, the inventor. We hope it will meet his own expectations, and prove a machine of value to the world.

For the New England Farmer.

GRAPES FOR OPEN CULTURE IN MAINE.

MR. BROWN:—The cultivation of grapes in Maine is yet in its infancy; but I am happy to say a lively interest, in some portions of our State, is beginning to be awakened, from the fact that it is found they pay as well as other desirable fruits, and are at least as reliable. We have our full share in Bangor, of grapes cultivated under glass, but it cannot be expected that many persons in our country towns will afford the expense.

It is important for us to find those varieties which are *hardy, early,* of *good flavor* and *productive.* All these qualities are indispensable for our success in Maine, for open culture.

Several of our pomological gentlemen are engaged in originating new varieties of grapes, and it is whispered one of the distinguished horticulturists is about bringing out several new varieties which may be valuable acquisitions to our present stock.

We especially need varieties that will ripen in favorable locations *every season*. This has been, for many years, the great desideratum with us in Maine, and somewhat shared throughout New England. Therefore, the person who will furnish it, will be a public benefactor, and will be deserving a rich reward, and doubtless will obtain it.

So far as I can learn in Maine, the Catawba is so late it is entirely out of the question, and also even in New England. The Isabella is a little better, but nearly useless for Maine. The White Sweetwater, on the Penobscot, has done better than any of the older varieties, notwithstanding its unpopularity in other States. This variety, for the last 15 years, at Bangor, has been very profitable. The vines are productive and the grapes sell readily. The vines also are older and stronger, and thus have the advantage of young vines of new varieties.

So far as I can learn, the Black Cluster, (also an old variety,) flourishes in Montreal and other parts of Canada, and where it has been planted in Bangor it has ripened well in good locations. But of the newer varieties which have ripened with us are the following, naming the earliest first, and then in succession: Hartford Prolific, Concord, Diana. Each of the above I consider good, and are saleable. These will increase in value with us, as the vines become strong with age. I have some vines of the Early Muscadine, but they are not called for, though it is early. I have many Delaware and Rebecca vines, but they have not yet shown fruit with us, and till they are "proved and tried," few will venture to make the trial of them.

You will confer a great favor on the people of the Penobscot country, if you will advise them when valuable new varieties that are very early, hardy and good flavored, are offered in the market, which you would recommend.

Bangor, Nov., 1859. HENRY LITTLE.

P. S.—The Clinton is an early grape of good color, but is so acid as to be generally expelled from the gardens on this river. H. L.

IS FARMING PROFITABLE?

No one thing operates more injuriously to the interests of agriculture than the widely-spread and popular idea, that farming is not profitable. It is almost a work of supererogation to reply to the charge, that the cultivation of the land, as an occupation for the mass of the people, is not a profitable employment, because it is evident to all who will look, that it is from this source that all supplies for the sustenance of man and beast are mainly drawn. The art of agriculture underlies all other arts, and sustains them all. Cease the cultivation of the soil, and commerce, manufactures, all sciences, and mechanic arts, and even breath itself, would soon cease.

The pursuit of agriculture as an occupation, may not be as profitable under all circumstances, as some other pursuit. It may be better for the people of a sandy tract of country on the sea-shore, to turn their attention to fishing, than to raising grain or grass, or for those in a mountainous and rocky country to make the water of the valleys turn their wheels to transform forests into various articles for household use. There may be reasons why individuals in all our towns should find employment in agriculture less profitable than some others in which they might engage. But with an average price of labor, land and implements, and with that degree of skill which the land demands of all, we do not believe that many acres of land are ever cultivated at a loss, when the crop is not injured by blight, frost, or some other casualty.

In the *Farmer* of Nov. 12, Mr. T. J. PINKHAM, of Chelmsford, Mass., sent us an article entitled, "*How to Reckon the Cost of Farm Produce*," in which he intended to show, by a single illustration of the culture of an acre of corn, that the farmer loses, rather than makes, money, by his farming operations. We did not then, nor do we now, think that his premises or conclusions were correct, but gladly published his bold article for the purpose of arousing public attention to this matter, and, if possible, of establishing a more correct opinion in the public mind. In this, we are happy to say, there is now a fair prospect of succeeding. As we then supposed would be the case, men of great experience in farming matters have taken up the glove thrown down by Mr. Pinkham, are criticising his positions sharply, and reversing the picture he drew.

The past season has been an unfavorable one in which to obtain a good crop of Indian corn,—too much cold and wet weather prevailing early, and it being too cold and dry in the latter part of the season; and yet, by exercising the proper care in selecting the land, in manuring so as to give the young plants an early and vigorous growth, as well as to sustain the corn during its time of maturing, we have never harvested a sounder or better crop of corn in any season. It has given us *sixty-five* bushels to the acre, most of which is suitable to be sent to the stores to be sold for seed corn.

We have not kept the precise cost of this crop, but near enough to show that it was not over seventy-five cents per bushel. Let us see—corn is worth now one dollar a bushel,

Sixty-five bushels, at $1,00, is	$65,00
Cost of 65 bushels, at 75 cents, is	48,75
Profit	$16,25
Stover, equal to one ton of best hay	$16,00
100 bushels turnips on same land	10,00
	$42,25

Such is the present year's result with us, and under the same mode of treatment, we have no doubt similar results would follow nine times in ten. We believe that the work of a good farmer for twenty days, will bring a crop of corn on an average of our New England land, that shall range along from forty to sixty bushels to the acre. He must be a man of judgment; must not spend five

or six days in getting out the witch grass, from an acre at the first hoeing, instead of destroying it by very late fall, and very early spring, plowing. If he makes this mistake, or some other as great, he labors at a loss, and adds five or six dollars to the cost of his crop! And so with regard to several other points which it is scarcely necessary to enumerate.

For the New England Farmer.

THE HUBBARD SQUASH.

WHAT IT HAS DONE THIS SEASON, WHEN TO BRING IT TO THE TABLE, ETC.

In many localities this has been a hard squash year. Correspondents from northern New England, central New York, several of the western States, and a portion of Pennsylvania, make mention of frosts fatal to vines, while the drought which late in the season prevailed in north-western New England, a portion of the west, and in some sections of our own State, was almost equally fatal. These, with the usual casualties from bug and borer to which vines are subject, have disappointed the anticipations of hundreds of enterprising men, who with the close of the season have reaped but their trouble for their pains. In an old town from which this now somewhat celebrated squash first went forth, with two exceptions, the yield has been very satisfactory, the average yield having been not far from six tons to the acre. My friend, Mr. Looney, from 15,200 feet of land (about one-third of an acre) obtained 7000 pounds of fine specimens, or at the rate of about ten tons to the acre; on the other hand, a friend whose land was but poorly drained, obtained from his half acre hardly sufficient squashes to pay for his seed. Neither extreme is a guide to the sensible cultivator. For my own part, I have so much faith in the public appreciation of this squash, founded on a personal acquaintance of its good qualities of fifteen years standing, that I have now seventy-two tons in store, and permit me, Mr. Editor, to refer any of our friends, who from unavoidable causes have failed in their attempts to raise it, to an advertisement in this paper. I am afraid that many experimenters are making a mistake in determining the quality of the Hubbard squash. It is not claimed of the Hubbard that it is the best of fall squashes; those who like a fine grained, dry meated squash will find nothing to excel the Hubbard in the early fall, but it does not gain its highest quality, its sweet and rich, nutty flavor, till winter opens.

A word about the purity of the Hubbard squash. Literally, any variety of squash is pure only when it is entirely free from any admixture with any other variety; but *practically*, no squash (the crook-neck perhaps, excepted) is found pure to this degree. For practical purposes, and in an honest use of the term "pure," a squash may be so called after two or three years of entirely isolated culture, great care in the meanwhile being exercised in the selection of seed. When the Hubbard becomes crossed with the autumnal Marrow, the fact becomes very conspicuous from the strong contrast in color; while the Marrow, when crossed with the African or South American varieties, may so conceal the fact as to make it evident to the critical eye only. Making a fair allowance for the difference, and the fact that what are sometimes termed crosses, are but the product of seed of various varieties that were smuggled in the manure, and I think we may infer that the Hubbard has, by careful culture, now attained a high degree of purity. The presence of the two varieties, the blue and green, indicate of necessity no want of purity, the difference being only in color, while the various shades in these two colors for the most part but indicate different degrees of ripeness. Whether my theory as regards the degree of purity possible to be attained by this squash be correct or incorrect, (and I would confine my remarks to the seed of last spring's planting,) the public may rest assured that whatever progress it is possible to make in this direction by isolated culture, will be as carefully attended to in the future as it has been for the two seasons past In conclusion, Mr. Editor, permit me to invite any of our farmer friends who may like the notion of looking on seventy-two tons of Hubbard squashes, to take a trip this way, where I will be happy to play the part of exhibitor, and answer any Yankee questions to the extent of my ability.

Marblehead, Mass. JAMES J. H. GREGORY.

For the New England Farmer

A LITTLE MORE ABOUT DRAINAGE.

BY JUDGE FRENCH.

MY DEAR BROWN:—My table is loaded with letters and papers about drainage, and I know not what to do with them better than to give them, or some notice of them, to our readers. And first, here is a letter from Edmund Ruffin, of old Virginia, and a volume, published by him in 1855, of "Essays and Notes on Agriculture." The writer is described on the title page, as "A practical farmer of Virginia, from 1812, founder and sole editor of the *Farmer's Register*, member and secretary of the former State Board of Agriculture; formerly agricultural surveyor of the State of South Carolina, and the first chosen president of the Virginia State Agricultural Society." The volume contains, among the rest, an Essay on Draining, one on Clover Culture, one on the Management of Wheat Harvest, one on the Weevil, one on "Embanked Tide-marshes and Mill-ponds, as Causes of Disease," and one on the "Usefulness of Snakes!"

Mr. Ruffin was a farmer, it seems, in 1812, before I was born, and he has diligently served the cause of agriculture ever since. In 1838, he re published Elkington's System of Drainage, by Johnstone, and he probably better understands that system than any other man in this country. Now, for one, I love to honor a man like this, one who through evil report and good report, stands by the cause of agriculture. He may advocate slavery, if he will, and we will take no offence when he sends us pro-slavery documents. Such "incendiary publications" do us no harm. Eli Thayer and his emigrants, with free labor and New England thrift, will argue these questions on Vir-

ginia soil, and show that free men can live where slaves and their masters starve, and the ballot-box, by-and-by, will peaceably settle the vexed question.

Such another man was Isaac Hill, of New Hampshire. No matter how politics boiled and bubbled, though he was in the hottest of it, Gov. Hill had a heart and hand for the farmer. These men, wherever they are, North or South, are the prophets of agriculture, who have been for a half century telling this generation the things which we begin but just now to believe and practice. If Mr. Ruffin will pardon me, I will send a part of his letter, which is too valuable to be kept private, for publication.

Old Church P. O., Va., June 13, 1859.

DEAR SIR:—I return you my thanks for your interesting and instructive volume on "Farm Drainage," which you were so kind as to send to me by mail. I have just finished reading it. It puts in a still stronger light than I had before understood and admitted, the great benefits of thorough draining, and especially by means of tile pipes. The plates (showing plans of executed drainings,) are illustrations admirable for their clearness. I also find, and greatly approve, in your directions, what has seemed to me a great and culpable omission in all the elaborate European directions that I have read; i. e., sufficient warnings of the numerous dangers of failure of operation of covered drains, because of omitting some one or other of the necessary precautions. I am very sure that if a new beginner were to construct drains by following precisely the directions given by Stephens, Thaer, or any of the numerous didactic treatises on this subject, that not one would operate well for a year, and probably not through the first heavy rain.

But while you give proofs of greater rewards for such works, when effective, I have also learned from you to fear more for the imperfection of such labors, by the inexperienced, even when most care shall be used. If I could have obtained tile pipes at a reasonable cost, I would gladly have used them years ago. But I am now convinced that if I had done so, every drain would have been a failure, from some imperfection then not fully appreciated. To start the work successfully in a new locality, (or anywhere in Virginia,) two things are needed, neither of which we have. First, The pipes to be bought at fair prices, or to be made on the farm where needed; and second, a capable, scientific drainer to lay off the plan of drainage, and to direct the general constructions. I am no longer a practical farmer, or personally concerned in the operations — having transferred my farm, and business, and the bulk of my property, to my children. But for the public interest, I should be very glad if such skill and knowledge as you have, or can avail yourself of, for these ends, could be brought to our country.

As soon as I can convey the necessary order to the bookseller, I shall direct to be sent to you by mail a copy of my "Essays and Notes on Agriculture," which I infer has not fallen under your notice. It contains an earlier publication on draining than the communications to which you refer. These earlier directions were published when I had but a contracted and dim perception of the remarkable natural feature of an underlying, water-glutted sand bed, which is the foundation of my theory and plan of drainage, and which is both the cause of the great evil (of excessive wetness) of a vast extent of our country, and the great facility for removing that evil. When the earlier article was written, I had indeed lately discovered, and profited by that natural feature, in my own operations. But I did not know that the same character extended beyond the limits of my own farm. But by subsequent investigations, I found that the same character belonged to a connected region of immense extent—and inferred that the like existed also under the bottom lands of many rivers far beyond the bounds of the region referred to. If I were now to write a second edition of the first piece, it would be very much altered from its present form, as well as much extended.

With this, I shall also send to you my last published pamphlet, on another subject—on one of the many branches of the great subject of negro slavery—on which, (from your locality,) we probably differ in opinion. If so, I beg you to understand that nothing therein was designed to offend such readers as yourself, or scarcely expected to meet their eyes. Very respectfully,

EDMUND RUFFIN.

WOMEN AND FARMING.

What follows, below, is a portion of the remarks made by the Rev. A. L. STONE, of Boston, at the annual dinner of the Norfolk County Agricultural Society, in September last. No man knows better than Col. WILDER, the President of the society, what kind of men to call around him on such occasions,—and well was his careful attention to this point repaid; for at no similar gathering have we ever known so much said that was practical and encouraging, and at the same time so eloquent and beautiful.

President Wilder introduced his distinguished guest to the multitude before him, and after a few pleasant introductory remarks, Mr. S. said:

It is a pleasant surprise to me to find the agricultural interest represented by so many of the gentle and more domestic sex. And yet their presence on such an occasion I believe to be in every respect legitimate and wholesome. For their proper connection with this interest is intimate and vital. The original description or definition of a wife is that she is a helpmeet to man. Just in what way, or in what variety of ways, this fitting help is to be rendered, that original document does not set forth. The practical answer exhibits its diversities so varied as never to repeat themselves. Sometimes this sphere of helpful fellowship is very much restricted, and again almost indefinitely broadened. The wife of the German farmer limits this sphere only with the boundaries of his estate. Her nursery is out of doors in the open field. Its canopy is the leafy shade. Its carpet the green turf or the soft brown mould. There her little ones roll, and tumble and sleep all day, while she keeps even stroke with her husband in

the day's toil. On a day's ride in the diligence through a pleasant portion of Bavaria, I amused myself by jotting down the occupation of a dozen or so of ladies, as I met them in succession. The first two were equipped with the deep, unwieldy hoes of the country, and were hoeing potatoes on a hillside; the third was plodding along on the road barefoot, bare armed, &c., with a burden on her head that would have broken the back of a moderate sized mule; the fourth and fifth were swinging scythes with the regular action of the practiced farmer, one of them leading the procession and keeping well ahead. Of the succeeding three, one was raking hay, one was pitching, and one sat on the top of a load, loading, while the only man of the group was driving the oxen. The next four were attendants upon house masons, and were carrying bricks and mortar on their heads up tall ladders, with an ease of step and balance that argued them experts at their trade. I have seen women in that same country holding a plow, and in some instances assisting a dumb ally—I mean a four legged one—to draw the same agricultural implement.

I suppose that some of us should not exactly covet this style of female co-operation, even in the stress of harvest season. But the question occurred to me here, whether there were not some sort of co-operation the wives and daughters of our farmers could render their lords in that calling, and if so, what. Now I take it, it is the desire of every true wife to have at least an intelligent sympathy with her husband's calling. There is here and there perhaps one sustaining the relation of a wife, to whom it is enough to share her husband's revenue, leaving out his cares and toils as trifles not worthy her regard. There may be here and there a husband whose ambition is to keep his more delicate half in blissful ignorance of all his out-of-door work, whether plowing or financiering. But I suppose the old fashioned and better notion is that of reciprocal sympathy between these fellow-pilgrims.

I never would marry a couple, if I knew it, who had any other idea of the tie, no matter what the fee might be. And perhaps I may be permitted to add, that with right views on this point, I am ready to join any number of couples together with a trifling pecuniary proviso.

But if the sympathy of which I have spoken be an intelligent sympathy, it should take some pains to be informed. I believe that an agricultural literature—and we may say with just exultation that we have now an agricultural literature—is quite as healthful and stimulating a literature in the drawing-room as that which deals in fashion plates and love-sick heroines. I don't think it would be unwomanly, in short, for the wives and daughters of our farmers to be able to converse wisely and wittily upon agricultural topics, with their husbands and fathers, or with gentlemen visitors. Such a conversation might easily vindicate itself in contrast with the vapid frivolities making so much of the staple of drawing-room chat.

It would do no harm either for these ladies to have a general familiarity with the out-of-door pursuits of those to whom they are thus allied, even if that were gained by an occasional walk afield, instead of a shopping excursion.

A visit now and then to the stable and the farm-yard might save the fair explorer from such a blunder as happened once to a metropolitan friend of mine of the same sex. Being in the country, and smitten deeply with rural tastes, it occurred to her one morning that it would be quite romantic to play milkmaid. So she took a pail and went forth, but not meeting with any great success in the operation, it was discovered that she had made a slight mistake in regard to the sex of the animal she waited upon.

But let the ladies of our agricultural homes make those homes centres of intelligence, culture and refinement; let them feel and show a just and generous pride in the calling to which they are thus allied, and a disposition and an ability to vindicate its true honor as compared with any other; let them give their rejoicing and sympathetic presence on such occasions as this; let the younger rank of these ladies place their delicate, soft hands for life as readily in the large, brown hand of the practical farmer as in the soft and white palm of a merchant's clerk or a professional aspirant.

The speaker said he could not look upon the farmer without regarding him as a heroic wrestler with nature. With him every season was a campaign, and every harvest a victory; and may God crown you all with a blessing, as you are already crowned with honors.

A sentiment in honor of the Judiciary was responded to by Judge Rockwell, of the Superior Court.

For the New England Farmer.

EXPERIMENTS IN CULTIVATING POTATOES.

Mr. Editor:—I wish to give a few facts in my experience of several things that have shown themselves during the season, on a piece of land cultivated by myself and family. In the first place, I will give the lay of the land, as it may have something to do with some of the phenomena.

The general lay of the land descends to the east from 6 to 10 degrees, with a hill west, or a continual rise westward for 100 rods, where the eminence is more than 150 feet above the field, and it descends to the east more or less for nearly a half mile, when it begins to rise, and within a mile it rises several hundred feet above the field. The field is 25 rods long by 8 wide.

Potatoes planted the last days of May, on a mellow soil, a part of which was planted with potatoes last year, and a part sowed to oats, on green-sward. Manured the present year with a small shovel full of compost in the hill, made of horse-manure, two parts, and one each of loam and meadow mud. A deep, moist, alluvial soil in the valleys, and inclining more to gravelly and stony on the eminences. Planted the north part with Peach-blossoms, and the south with Davis' Seedlings; cut two pieces in a hill; hoed well the last days of June. They grew well, and all looked fine until the 31st day of August, when at 2 o'clock, P. M., we had a shower from the west, with some thunder and lightning at a distance; rained smart for nearly half an hour, the water very cold, but no hail that I discovered. At 6, P. M., as I was passing the piece, there was a strong smell of decaying vegetation met my olfactory nerves, and in a day or two the vines turned black, and in a week another strip was seen to begin to turn; the first

being in the Peach-blossoms and the latter Davis' Seedlings, and spreading each way to the walls, north and south, in the course of two or three weeks, while the top vines remained green until October 16, when they were killed by frost. The potatoes on the low land were nearly one-third affected with rot. In the Peach-blossoms, a very few, while among the Davis' Seedlings none were diseased. The best of the Peach-blossoms yielded a bushel on a square rod, containing 24 hills, or 160 bushels to the acre, while the poorest were less than 100 bushels to the acre.

The best of the Davis' Seedlings were a bushel on three-quarters of a rod, containing 18 hills, or about 210 bushels per acre, while the poorest yielded less than 150 per acre.

The land rose nearly 20 feet higher in the centre than at the valleys, while at the north and south ends it was from 5 to 10 feet higher.

One other thing I noticed. The land was old pasture, broken up in the fall of 1857, and had been plowed and harrowed several times; in most places it was free from grass, but as the land was natural to red top, in some hills it was found quite strongly rooted when I dug the potatoes, and where the grass was, whether in the whole or a part of the hill, nearly all of the large potatoes had begun to decay.

I have given a statement of things as I found them at various times, and hope that some of the wise ones among your numerous readers will give a scientific demonstration thereof for my benefit, and others interested in the raising of the potato crop.

HERVEY BARBER.

Warwick, Oct. 24, 1859.

For the New England Farmer.

IS FARMING PROFITABLE?

MR. EDITOR:—I have just read in the *N. E. Farmer* of Nov. 12, the article signed "T. J. Pinkham, Chelmsford," on the profits of farming, or rather on the *losses* of farming. I am surprised that any one living in the counties of Middlesex and Worcester, Mass., or Hillsborough, N. H., should write such an article, when the farmers in these counties are the most wealthy of any part of the population.

There are 40 to 50 farmers in the town of Hollis, N. H., worth from $3,000 to $15,000, or more, and I have known most of them from the time they took possession of their farms, either by purchase or from their fathers. I think at least two-thirds of them either owed, or had to pay out to heirs or support the old folks, to at least two-thirds of the value of their farms at the time they took possession of them.

In almost every case where a young man has bought a farm, and has been temperate and industrious, and had tolerable health, he has made money. Nor have these farmers been miserly or mean, either with themselves, their families or the public. They have most of them good, comfortable dwellings, well painted inside and out, for their families, good barns for their stock, and sheds, &c., for wood, carriages, grain, &c., most of which they have either built or repaired since they came into possession. They educate their children, and spend money for proper purposes as freely as any other class of citizens. If farming is such poor business, how have these men supported their families, paid their debts, repaired their houses and barns, or built new ones, and lent money, taken stocks, &c.? Could they do it by raising corn at a loss of $10 each acre, or calves at a loss of $16 on each calf?

Let us look at his estimate below on the cost of raising an acre of corn, viz.:

ONE ACRE OF CORN.	DR.
May 10, Two men, two yoke oxen and plow one day	$4,25
" 15, One man, four oxen and cart one day hauling manure	3,25
May 15, Ten loads manure	10,00
" 16, One man one day, yoke oxen and harrow half day, spreading manure and harrowing	1,75
May 17, Man, horse and boy ½ day furrowing	75
" 18, Man and boy one day planting, $1,50, seed 25	1,75
" 19, To putting up line, &c	25
June 6, Two men, horse and plow cultivating and hoeing	2,50
June 6, To replanting and ashing	2,00
" 25, To hoeing and cultivating	2,50
July 10, To pulling weeds	50
Sept. 10, To two men cutting stalks and stooking do.	2,00
" 25, To carting stalks to barn, &c	50
Oct. 12, To harvesting	2,00
" 13, To husking and taking care of butts	2,00
" 13, To interest on land, capital and taxes	3,00
" 13, To fencing and rents of barn and corn-house	3,00
Dec. 15, To shelling and marketing corn	5,00
	$47,00

ACRE OF CORN.	CR.
Dec. 15, By 30 bush. shelled corn sold	$30,00
" 15, By 6 bush. ears soft corn sold	2,00
" 15, By stover and pumpkins	5,00
	$37,00
Net loss on crop	$10,00

Now, our land, (upland,) must be broken up, whether we raise corn or lay down immediately to grass.

Not over one-third of the cost of breaking up should be charged to the first crop. The manure, if spread, not over one-fourth should be charged to the corn.

Few replant or ash, and as to pulling weeds, you had better let them alone than pull them in a dry time. A boy will cut the stalks for half the price, and your men will husk it out in an evening, if good corn. Shelling the corn is much too high. I have had 50 bushels threshed out in a day by one man several times. Now let us see:

⅓ of the cost of first plowing to the first crop	$1,42
⅓ of the manure and hauling	3,31
Harrowing, &c.	1,75
Furrowing, planting, seed and line	2,75
First and second hoeing	5,00
Cutting stalks and transplanting	4,50
Husking corn	1,00
Interest, &c.	3,00
Thrashing out corn	1,00
	$22,73

All this help has been called one dollar per day. Help hired by the month, for 8 months, does not average over 58 cents per day, and this help, besides doing the work set down in the above list, is expected to get up in the morning, make the fires, feed the hogs, milk the cows, feed what stock may be at the barn, and cut wood, or work in the garden the rest of the time till breakfast, and milk and do the other chores at night—well nigh enough to pay the board. But call it 75 cents per day—three-quarters of $22,73 is $17,05. Allowing his estimate of $37,00 sold, the cost that should be charged to the corn is $17,05. Profit, $19,95.

I consider corn one of the best crops raised;

wheat, oats and grass follow it better than they do potatoes.

I asked how our farmers had contrived to pay for their farms, build, paint and blind their houses, have money to let, and stock in corporations? I should answer the question by the above estimate. If "T. J. P." can account for it in any other way, I should like to have him.

Hollis, Nov. 14, 1859. ED. EMERSON.

REMARKS.—Thank you, Mr. Emerson, we have no doubt great good will come out of this discussion. Mr. Emerson's name will be recognized by many readers as that of a frequent correspondent to these columns,—but for the gratification of those who do not know him, we will say that he is quite largely engaged in farming, working with his own hands and directing his affairs in person. No one can justly charge him with being a fancy farmer, or of giving undue credence to books.

CONCORD FARMERS' CLUB.

The Annual Meeting of the Concord Farmers' Club took place on the evening of the 10th inst., when the following persons were elected as its officers for the ensuing year, viz.:

MINOT PRATT, President.
ABIEL H. WHEELER, Vice President.
JOSEPH REYNOLDS, Secretary.
ELIJAH WOOD, Treasurer.

The subjects prepared and adopted for the several evenings during the winter are as follows: Corn; Sheep Husbandry; Subjects for Premiums at Agricultural Exhibitions; Rotation of Crops; Preservation of Meats; Vegetable Food other than Hay; New Plants; Soiling Cows; Experimental Farming; Manures and their Application to Different Soils; Draining; Root Crops and their Comparative Value; Preparation of, and Marketing Produce; Best Breeds of Cows; Fruit Trees and their Culture; Market Fairs; Grass and Grass Lands; Culture of Flowers; Small Fruits; Articles of Food for the Family, and their Preparation; Forest Trees.

It required much care to select topics that had not already been under discussion, perhaps more than once, and to express them, so as to require a somewhat different turn of thought from what they had heretofore received. It was thought that some of the old subjects, such as the corn or hay crops, seeding, reclaiming or draining, might be presented in such a light as to give them a new interest and value.

The first meeting of the season was opened with a manifestly increased sense of the importance of the object of the association. If we can have access to their records, we shall find pleasure in laying an occasional account of their doings before the reader.

For the New England Farmer.

WARMING THE BARN AND COOKING THE FOOD.

MR. EDITOR:—While reading Mr. Flint's admirable work on Dairies and Milch Cows, the question arose in my mind, can New England farmers profitably adopt the custom of warming their stables, and steaming, or in any way cooking the food for their cattle? With the present style of barns, it seems to me an impossibility. With a properly constructed stable, and a well devised heating and ventilating apparatus, I think this object can be readily attained. I therefore propose to suggest a plan of heating and ventilating for the consideration of the readers of the *New England Farmer.*

In the outset, I wish to lay down certain conditions, which I regard as essential to cheap and effectual ventilation and heating.

1. No apartment can be properly heated and ventilated, into which the pure, warm air is admitted at the bottom, and has a ventilator at its top. With such an arrangement, the pure air being lighter just in proportion as it is warmer, rises to the top and passes directly out, carrying with it most of the heat, and leaving in the room the cold, impure air, save the trifle which mixed with the pure air in passing upwards.

2. The air within the room should be influenced as little as possible by external currents.

3. There should be a constant and uniform supply of pure warm air furnished, to take the place of what is withdrawn.

4. The warm and pure air should be agitated and mixed as little as possible with the impure cold air.

5. Either a heated flue, or some mechanical power, must be introduced to draw out the impure air.

6. The apparatus should be so simple as to work uniformly, and not get out of order.

A proper construction of the stable is of the first importance. Wherever it is practicable, it should be built on a side hill, and the whole space in the basement appropriated to the cattle, an apartment for cooking their food, one for dry muck, or other absorbents, and the root cellar. The walls, where built against the earth, if not laid in mortar, should be faithfully pointed, and have the earth well compacted on the outside. Where exposed to the weather, a small space o confined air should be left in the interior, and it would be well to have double windows. Over head, the room should be plastered or ceiled with jointed and matched boards, and the space between the joists filled with chaff or cut straw. It is evident that a stable constructed in this manner, and filled with a stock of cattle, would require but little artificial heat, and that could be readily supplied by the fire which cooked their food. In this apartment all the excrements of the cattle should be faithfully mixed with absorbents, and, at least once a day, carefully removed. A thrifty farmer would of course see that a proper receptacle was provided for them.

The cooking-room should be provided with a chimney two feet square on the outside. It should be built in the most substantial manner, smoothly plastered on the inner side, and rise above the highest part of the barn. In the interior of the

chimney, a stove pipe of stout sheet iron or cast iron should be carried up to a few inches above the top of the brick chimney, it being securely fastened to the brick work so as to be held firmly in the centre of the brick flue. The iron flue should have a close fitting accessible door, near the bottom, for the purpose of clearing out the soot, and a stove pipe inserted near the top of the room, and extending through the brick chimney, to receive the smoke pipe from the fire. The brick chimney, in addition to the hole for the smoke pipe, should have a large register to let off the heat, when not required in the stable, and the nearer the top of the room it is, the more efficient it will be; also, an opening at the very bottom, to receive the foul air from the stable. This last should be so placed as to afford access to the door in the iron pipe. The partition between the cooking-room and stable should be made with several good sized openings, both at the top and bottom, and the floor of the former should be raised so as to afford a free passage to the foul air of the stable, through the lower openings in the partition, and, thence, under the floor, to the opening near the bottom of the brick chimney. The space under the floor should be made light, so as to keep out all vermin, as well as currents of air from all sources except the stables. The openings at the bottom of the partition should be protected by wire screens, to exclude vermin, or any combustible material which might be drawn into them, and those at the top should have board shutters to shut off the heat when not needed in the stable.

To supply the stable with pure air, there should be a ventiduct running the whole length or width of the building, as most convenient, with an opening at each extremity. It would be well to make this ventiduct at least four times as large as the external openings, so as to lessen the current when a strong wind was blowing directly into it. It should be made rat-proof, and have the ends protected by wire screens. On the side of the ventiduct, an air chamber should be made extending under the fire. The air chamber should have an opening into the ventiduct large enough to ensure a full supply of pure air under all circumstances. With an apparatus on the principle of the common ventilating stove or furnace, with suitable cooking utensils attached, a large amount of air might be warmed while preparing the food for the cattle. This, together with what could be obtained by carrying the stove pipe around the top of the room before entering the chimney, would heat the air to a high degree, and it having no means of escape but by the apertures at the top of the partition, it must flow into the stable and diffuse itself over the top of that apartment. While this is going on, the hot air and gases escaping from the fire, through the iron flue in the brick chimney, would give a strong upward movement to the surrounding air, and a constant flow would take place from the bottom of the stable, through the space under the floor of the cooking-room.

I leave the arrangement of the cooking apparatus to the wants and the ingenuity of the farmer, or the skill of the stove-maker, only stipulating that every thing around the fire, and air-chamber below it, should be fire-proof, to guard against danger from reflex currents of hot air when doors or windows are opened on the windward side of the stable. I would moreover suggest that it might be well to connect the iron flue with the moist earth, by one or more iron rods to carry off any electricity that might happen to travel by that route.

It is evident that the plan I have suggested has no intricate system of valves and dampers to be regulated by the attendants on the cattle. The stove-maker would of course construct his part of the apparatus with the means of regulating the fire.

The question now comes up, will it pay? I have no hesitation in saying, that it will much more than pay, unless the advantages of warming the stable and cooking the food for cattle have been much overrated. In the first place, there will be a saving of food and increase of milk, a greater tendency to fatten, and a better condition of the whole stock in the spring. Besides these, a great many other things may be profitably done with a warm room of this kind. In a a pen in the corner, the February and March pigs may be dropped with safety, and thus be ready for the best market. The hens may have their allotment of space, and set at defiance the coldest storms, while they fill the family or market basket. The early potatoes may be started in a part of the cooking-room, and so of the cabbage plants, tomatoes, &c.

The cost of fitting up a stable of this kind, 52 by 40 feet, I think, could not be more than $150 to $200 over that of a common barn cellar of the same size. This extra outlay could easily be saved on the rest of the building. A barn of the above dimensions would accommodate about as much stock, and afford as much storage room, as one of the common barns 75 by 38, with a floor way through the whole length. From its greater compactness, there would be much less outside to finish, and from the upper part being only required for storage, the finish might be much cheaper in kind.

H. LINCOLN.

Lancaster, Mass., Nov., 1859.

For the New England Farmer.

"HOW TO RECKON THE COST OF FARM PRODUCTS."

In a late number you repeat the question propounded by the Massachusetts Agricultural Society in 1800, "How many days' labor are needed to cultivate and harvest an acre of corn," and state that the average of the answer was 17⅞ days, and say that with our improved implements, the time should be two or three days less now. In this opinion I think you are correct. But friend Pinkham, in his remarks upon the subject at the head of this article, makes out that 24 days' labor of a man, and 1½ days of a boy, besides 4½ days of a yoke of oxen, and some hours of a horse, are required. I wonder if he has followed carefully his own directions, and kept an accurate account of the labor expended on an acre of corn? He writes like a man of intelligence. But his account looks to me as though it was made up by estimation, rather than by the record. In either case, I would advise him to quit farming immediately. For, in the first place, farming must be to him a very discouraging business. He goes to his labor, day by day, under the conviction that he is losing money, and he cannot labor cheerfully and willingly; and secondly, by imparting his *feelings*

to others, he must discourage them; and lastly, his own record proves him to be a very poor farmer. The man who spends 24 days' labor on an acre of corn, and gets but thirty bushels at that, should not attempt to raise corn, neither should the man who puts but 10 loads of manure on an acre. It costs no more labor, except for hauling and spreading, to put on 20 loads, than 10, and with 20 loads on an acre fit for corn, well cultivated. he would obtain 50 bushels, and 200 bushels of turnips, worth 10 cents a bushel, making the result as follows:

Corn. 50 bushels, worth	$50
Stover	10
Turnips	20—$80

To the debtor side add $10 for manure, making it $57. Then deduct 6 days' labor and half the value of the manure, and we have $41. Now deduct this from the product of the acre, and we have $39 profit, and observe that we have allowed the man $1 per day for his labor. If, then, a farmer can get a dollar a day for his 18 days' labor, and a dollar a day for his oxen, and $39 besides, I ask if it is not a good business? What right has any farmer who can do this, to croak over farming as poor business? Or to say that the farmers are wearing out their lives and their farms, and coming to want?

Many farmers are doing the very thing I have stated, only, they get 60 bushels of corn and 300 bushels of turnips.

Friend Pinkham must turn over a new leaf in his account book, and look at matters with a more cheerful spirit. Look around upon your neighbors, who have pursued farming with industry and skill for 20 or 30 years. Have not their farms improved? Have they not better stock, and more of it. better carriages and tools, better orchards, better buildings, better furniture, better clothing, more books and papers? Do they not educate their children better, and are they not more intelligent than they were when they began to be farmers? How many farmers do you know who began life poor, or in debt, and who have paid off their debts, and are now the owners of good farms, and occupy a respectable standing in society? How many farmers within the circle of your observation have failed, in proportion to the number of merchants who have gone through the same operation?

I know very well, that the farmer's life is not an idle life. He must improve all his time, must be up with the lark, and make his arrangements with care and skill. He must shell his corn in the evening, or on rainy days, when he cannot work out of doors. He must do everything in its appriate time. He must learn to kill two birds with one stone. For instance, he wants to prepare a piece of land to yield a good crop of grass. He plows it thoroughly, puts on 25 loads of manure to the acre, and thus gets 50 bushels of corn and beans, the land in a good state to be seeded down, with a dressing of ashes or plaster, or Superphosphate, to wheat and grass. He thus gets a good crop of corn, 24 bushels of wheat, worth $48, and the straw, worth $12 more, and three or four good crops of grass, before it needs plowing up again. He must look ahead, and make his arrangements, not for one year only, but for a series of years. He will occasionally meet with losses. His crops will fail, from frost, or drouth, or blight. But he will not have his eggs all in one basket, and some of his crops will be good, whatever the season may be. This season, the corn and apple crops are small. But the small grains, and potatoes and hay, have been good, and the farmers have a good supply, and are happy and contented, and are improving this fine November weather in making arrangements to try again, and why should they not? Who does not make losses and meet with discouragements in his business, be it what it may? The mechanic sometimes cannot get work, or fails to get his pay when his work is done. How is it with the shoe business now, to which Mr. P. refers? I understand that both manufacturers and laborers are working for small profit. The farmer has as few ups and downs as those who are engaged in any other business whatever. I think there has been no time within the last 5 years, when corn would not bring $1 a bushel, or butter 25 cents, and certainly hay and potatoes are sufficiently high. Brother farmers, go on and make ample preparations for a wider breadth of crops and deeper and more thorough tillage next year, with the full assurance that you are engaged in the best, the safest, the most healthful and the most moral business of any class of men in the community.

Concord, Nov. 15, 1850. J. R.

For the New England Farmer

THE NEW PLOW.

MESSRS. EDITORS:—Having heard that a new implement of the plow kind was to be tried upon the intervale at Charlestown, N. H., four miles from my residence, on the 11th inst., I availed myself of the opportunity to see it tested. I found the plow in full operation, my old friend, Mr. Holbrook, of Brattleboro', guiding its course, though without much effort, for the plow, when gaged properly, would almost keep its place in the furrow without guiding. I saw several different sized mould-boards and land-sides, with a skim share of cast iron and steel, some of each kind of metal, lying about upon the grass near the scene of operations.

This was rather a novelty to see so many plows in one. The operation was watched closely by several of the best farmers of the neighborhood; and it was really a new thing under the sun to see how rapidly one plow could be changed to another, all, and each one, doing its appropriate work in the best possible manner.

There was the deep tiller, without the forward or skim share, going to the depth of twelve inches, with a proportional width of furrow slice, perfectly inverted, flat furrow, and so along up by a change of mould-board, to eight, six and five inches, the draft, of course, lessening as the change was made to less depth. The forward share, or skim, was put on with a short land-side and mould-board, and the implement again showed itself to be very earthly-minded, for it went down to the depth of twelve or fourteen inches, throwing the earth up four to six inches above the level of the inverted flat furrow sod which had just been turned, leaving it in the finest condition for a pulverization with the harrow or cultivator. This was the kind of plowing that struck my fancy as being the very best of the best. I tried holding the plow,

as did several others of the lookers-on; it was remarked with what ease it held, particularly when operating in this double form.

I learned from Mr. H., who I think was instrumental in getting up the models or designs for the various combinations of this plow, that there were thirteen different changes, by merely a shift of mould-boards, and in some of them a shift of land-side; designed to do all kinds of plowing in the most thorough manner, with the same standard and wood-work, from bog-meadow, through all the grades of surface and soil, down to the smooth and level intervale. The land where this trial was made, had apparently never been plowed more than five inches deep, and, though intervale, below this shallow depth it was tenacious and hard, and of course the plow could not show so easy a draft as on similar soils that had been broken and stirred to a greater depth.

The last work of this plow was on stubble land, single share, short mould-board and land-side, with a single pair of horses. It worked admirably, leaving a fine tilth, so nicely rolled together and mixed that the furrows could not be distinguished or counted, having the appearance of a finely harrowed or cultivated surface. From the peculiar manner of the curve of mould-board, and roll of the lifted soil in this stubble plowing, with the height of standard, I have no doubt of its turning under without clogging almost any amount of green crop, mould, or coarse, strawy manure.

I doubt whether there has ever been presented to the farmer any one improved implement better adapted to his wants, as to economy, convenience and thoroughness of work, than this universal plow. It is a dozen plows in one. My acquaintance with it is yet limited; I intend to extend it, for I regard it as the plow of plows. J. W. C.

Springfield, Vt., Nov. 14, 1859.

EXTRACTS AND REPLIES.

LICE ON APPLE TREES.

Please inform me what will kill lice on apple trees? C. ROBINSON.

Weston, Mass.

REMARKS.—Keep them in a vigorous, but not too rapid, growth, by cultivating the ground where they are growing; prune them properly, late in June, if they need it, and wash them annually with common soft soap diluted with water until it is about the thickness of cream. Lice don't like a perfectly healthy tree half as well as they do one stunted and struggling for existence. There may be other ways to kill lice on trees, but we consider a perfectly healthy growth better than all drugs.

—

MEASUREMENT OF HAY.

Can you, or some of your readers, inform me how many square feet of English hay, in a mow, will make one ton of 2000 pounds by weight? Also. how much meadow hay in feet to a ton?

Billerica, Mass., Nov., 1859. A READER.

REMARKS.—We copied an article into the *Farmer* in 1857, from the *New Jersey Farmer*, which stated that "the top of a mow, say about one-third, would require 800 cubic feet to the ton; the middle 700 feet, and the bottom 600 feet." "A Subscriber" in Reading, Vt., states that at the bottom of a mow 400 feet will make a ton, and that a whole barn full weighed out, averaged a little less than 500 feet to the ton. Mr. M. J. Perkins, another of our correspondents, states that farmers in his region estimate that from four to five hundred cubic feet to the ton, according to the position in which it lies, is sufficient. Meadow hay is usually lighter, will not pack so closely, and more feet must be allowed for it.

—

THREE ACRES OF LAND TO SUPPORT A SMALL FAMILY!

A clergyman, who is compelled to abandon his profession by ill health, is desirous to know how he may cultivate three acres of rich land, so as to support a small family? Information will be thankfully received.

West Springfield, 1859.

REMARKS.—Here is an interesting problem,—who will solve it for our unfortunate friend? He who can do it, and will do it, will confer a substantial blessing upon mankind generally, as well as to a "clergyman in ill health." But the question has its difficulties, because there are so many contingent circumstances surrounding it, such as locality, the nature of the soil, markets, &c. &c. We once knew a person whose sole business was upon less than one acre of land, and he hired a man to work two or three months of each year with him, upon the same spot, and we suppose he supported his family well. But this land was located within the limits of a city, and a considerable portion of the sales were green-house flowers, though the whole grounds were crowded with various fruits.

While we hardly dare to venture any suggestions upon this question, we hope some of our attentive and able correspondents—and we have many such—will. We will suggest, however, that *three acres* of land is a pretty large tract to take care of—there are a great many productive *farms* in the world, not half so large. It will require a great deal of hard and persistent labor to tend such a farm,—and to make it profitable, its possessor should have an ample capital in a stern will, in strong and well inured muscles, and in well versed horticultural skill. He must also be a good deal of a merchant, as well as gardener and laborer, and take advantage of the markets, and produce his spinach and peas, his strawberries and asparagus, his cauliflower, cabbages and celery, so that they shall be in the market at the instant the *fashionable* appetite demands them!

It will be no child's play to manage three acres so that its profits shall keep back the wolf from

the door! It *can* be done, but only through unremitting skill and toil. "Livelihoods are hard to get," but they are as easily acquired in farming or gardening, as in most other callings, and farming and gardening demand, as well as other callings, skill and capital to ensure successful results. The idea, so widely extended, is entirely erroneous, that any body can at once be a farmer or a gardener. They may just about as appropriately be a lawyer or a minister. Any man can plow; so any man can preach or give advice. We sincerely hope some gentleman of genius and experience will show our correspondent "how he may cultivate three acres of rich land so as to support a small family."

—

THE SEASON—CROPS—CORN LAND—STOCK AND HAY.

The past summer has been a very uncommon one. There has been a killing frost every month of the past season. It has been dry as well as cold. After the equinoctial storm of September 15th, there was a great change in the weather. It has been remarked, "If it clears off warm after the equinoctial storm, every after storm will clear off warm." And such appears to have been the case the past fall. Although we have had many frosty nights, and quite a number of snow squalls, it has been rather a pleasant fall thus far. The ground is still open, and the pastures are quite as green as they were some of the time last summer. Water is very low yet; but few springs or wells have started, that were dry. We have had but one good shower of rain for five weeks.

The lesson of the past season teaches us, that, as far as raising corn is concerned, the high, hilly land is best. Most corn on such land about here has ripened, while that on low lands has been a failure. Corn that was planted deep, stood the spring frosts better than shallow planting.

There is quite a panic about here just now, on account of the lowness of stock, and a supposed scarcity of hay; the latter has sold at auction as high as fifteen dollars per ton; about double the usual price. Auctions are getting to be rather plenty. Many are selling their farms; many more are selling stock and hay, and others are selling stock, and keeping their hay for a better price. There is, in reality, no scarcity of hay; but stock is rather cheap and poor. City folks must expect poor beef this winter. HERMIT.

Cedar Valley Place, Newbury, Vt.

—

SPONTANEOUS COMBUSTION IN HAY.

Can you give me any information concerning the combustibility of salt hay stored in a barn?

Two barns of ours have been burned, one last year, and one this year, each of which had several tons of this kind of hay, and nothing else stored in it. My own opinion now is, that each of these fires originated in spontaneous combustion; the hay in each case had been stored there two or three months previous to the fire. It is well known that English hay stored in a green state, will thus catch fire, but salt hay, even if put in green, I have lways before considered safe in this respect. Several of my neighbors wish for a little more light upon this subject. I hope they may have a more satisfactory *light* than I have had. Information of this kind, I see, is frequently elicited by like publications in your valuable paper. OMEGA.

Roxbury, Mass., Nov. 15, 1859.

REMARKS.—We are sorry not to be able to shed profitable *light* upon the question propounded by our correspondent. No doubt some one can, and we hope will, give it attention.

—

WISE MEN OF THE EAST.

I have noticed, of late, several communications on important points of culture, under the signature of experienced cultivators, in this vicinity. I am glad to see these; but at the same time, cannot but think, that they would do well to remember, that others may know something as well as themselves. For instance, I believe the late Dr. Harris, of Cambridge, knew something about "insects injurious to vegetation." But when I see his views controverted and denounced, by young men whose beards are not yet fully grown, except a little on the upper lip, perhaps, I think such young ones would do well to keep in the shade a spell longer. ESSEX.

Nov. 20, 1859.

—

RECLAIMED MEADOWS.

I have known many specimens of these; but the question often recurs, how long will they stay reclaimed? My answer is, just so long as the cold, stagnant waters are kept entirely away from the fibrous roots of the vegetable growth. When a damper is thrown upon these fibres, by accumulated waters, then the perfect reclamation of the meadows gives way. As well might we expect a reclaimed drunkard to stay reclaimed by taking a small "horn" each day, as a reclaimed meadow to produce sweet products, without more than ordinary care applied. What is bred in the bone, cannot be beaten from the flesh. P.

Nov. 24, 1859.

AGRICULTURE IN CHINA.

Every substance derived from plants and animals is carefully collected by the Chinese, and converted into manure. Oil cakes, horn and bones are highly valued; and so is soot, and more especially ashes. To give some notions of the value set by them on human offal, it will be sufficient to mention that the barbers most carefully collect and sell, as an article of trade, the somewhat considerable amount of hair of the beards and heads of the hundreds of millions of customers, whom they daily shave. The Chinese know the action of gypsum and lime; and it often happens that they renew the plastering of the kitchens, for the purpose of making use of the old matter for manure.

No Chinese farmer ever sows a seed of corn before it has been soaked in liquid manure diluted with water, and has begun to germinate; and experience has taught him, (so he asserts,) that this operation not only tends to promote the growth and development of the plant, but also to protect the seed from the insects hidden in the ground.

During the summer months, all kinds of vegetable refuse are mixed with turf, straw, grass, peat.

weeds and earth, collected into heaps, and when quite dry, set on fire; after several days of slow combustion the entire mass is converted into a kind of black earth. This compost is only employed for the manuring of seeds. When seed time arrives, one man makes holes in the ground; another follows with the seed, which he places in the holes; and a third adds the black earth. The young seed, planted in this manner, grows with such extraordinary vigor that it is thereby enabled to push its rootlets through the hard, solid soil, and to collect its mineral constituents.

The Chinese farmer sows his wheat, after the grains have been soaked in liquid manure, quite close, in seed beds, and afterwards transplants it. Occasionally, also, the soaked grains are immediately sown in the field properly prepared for their reception, at an interval of four inches from each other. The time of transplanting is towards the month of December. In March the seed sends up from seven to nine stalks with ears, but the straw is shorter than with us. I have been told that wheat yields 120 fold more, which amply repays the care and labor bestowed upon it.

It is quite true that what suits one people may not on that account suit all countries and all nations; but one great and incontrovertible truth may, at all events, be learned from Chinese agriculture, viz., that the fields of the Chinese cultivator have preserved their fertility unimpaired and in continued vigor ever since the days of Abraham, and of the building of the first pyramid in Egypt.* This result, we also learn, has been attained solely and simply by the restitution to the soil of the mineral constituents removed in the produce; or what amounts to the same thing, that this has been effected by the aid of a manure, of which the greater portion is lost to the land in the system of European (and American?) cultivation. —*Liebig's Modern Agriculture.*

* Vessels of Chinese porcelain are found in the pyramids, of the same shape, and with the same characters of writing on them, as on modern China at the present day.

For the New England Farmer.

THE HYDRAULIC RAM.

I notice in the November number of the *Monthly Farmer* a call for information concerning the above machine. I have one in operation on my farm, which is situated in the extreme southerly part of this town, adjoining the Great Bay of the Piscataqua river. It has been in operation about twenty months, and works far beyond my expectations, the water being driven up a rise of about eighty feet, and thirty-five rods distance. It furnishes an ample supply of water for all purposes, of both house and barn. The fountain, or spring, affords about five gallons of water per minute; the drive pipe is of iron gas pipe, one inch calibre, and forty-five feet in length; the conducting pipe from machine to house is lead pipe, ¾ inch calibre, and thirty-five rods in length, laid three feet beneath the surface of the ground, and from a reservoir in the house the water is conducted under ground in a ½ inch lead pipe five rods to the barnyard. The fall from the spring to the machine is eight feet six inches, and the rise from the machine to the house is about eighty feet, and the distance thirty-five rods. The quantity of water received at the house can be varied by means of an adjuster attached to the machine, but in this case there is ten times the quantity of water driven up that is needed. The ram is from the manufactory of W. B. Douglas, Middletown, Conn., and size, No. 3; cost, six dollars.

The farm has generally been occupied by a tenant, but during the few months of very cold weather last winter, some days of which were most severe freezing weather, no one occupied the house, and there was no fire in it for some time, yet the stream into the reservoir, and the reservoir itself, were not in the least affected by frost, and the water flowed the same as it did in the month of July, and of the same temperature. The expense of labor and material in the whole operation did not exceed seventy-five dollars. I procured a diagram from Mr. Douglas, and directed the whole business in person, without the least inconvenience or mistake. Any further and more particular information will be given with pleasure, if desired.

Durham, N. H., Nov., 1859. V. SMITH, JR.

THE CANADA THISTLE.

This is a very troublesome production. It is said to have been introduced originally as an ornamental appendage to the flower garden. The root is perennial, creeping, and remarkably tenacious of life. It is also wonderfully prolific, propagating itself from the filaments of the roots, as well as from the seed.

When lands have become foul with this plant, the best plan, probably, that can be adopted for

its speedy and thorough eradication, is to plow them in narrow furrows—say six inches in width, with a sharp plow. In this way every root will be cut off or detached, and if the soil be immediately and thoroughly harrowed and laid down to grass, the thistles will soon disappear. When thistles spring up in vacant lots, by the road-side, and in fence corners about the premises, mowing at the period of inflorescence, or when most of the plants are in full bloom, for several seasons in succession, will be quite likely to destroy them.

When the thistle obtains footing in pasture lands, and when plowing to effect their eradication is impracticable, the scythe must be put in use as suggested above, and as a generai thing, may be employed with good success if faithfully persevered in. If, after mowing the tops—which, if possible, should be done when the thistle is in full bloom—salt be sprinkled upon the stumps, and the enclosure left free for sheep, the labor of eradication will be more speedy and complete. This is a much more economical method than extracting by hand, which is tedious, and not always a successful process. On clayey loam, the thistle flourishes with greater vigor, and appears to be much more tenacious of life, than on soils of an arenaceous, or sandy texture. Although it takes root as readily on the latter as on the former, and attains, ordinarily, a full development, yet it yields more readily to cleansing operations, and appears to be in a great measure destitute of that vigorous hardihood of constitution, which characterizes it when growing on soils that are more clayey.

The beautiful illustration of the thistle which we present above, is copied by permission from "*Darlington's Weeds and Useful Plants*," one of the pleasantest books in our knowledge. Published by Saxton, Barker & Co., N. Y.

For the New England Farmer.

AN EXAMPLE IN UNDERDRAINING.

Mr. Brown:—In a brief note of Nov. 16, published in your paper of to-day, I spoke of my observations on processes of underdraining, that I had seen the present season, on farms in this vicinity. The minutes I then had in mind have since passed into other hands. But as it may interest some of your many readers to know what is doing in this important branch of husbandry, I will endeavor to sketch briefly what I then contemplated.

The most extensive experiment I have seen was on the Pickman farm, (so called,) in South Salem. It extended over more than five acres of flat, swampy land, situated between the Mansion House and the Forest River road. Various attempts have been made, in years past, to bring this land into condition for culture, by throwing it into beds of 30 or 40 feet in width, and excavating a main ditch through the centre—all of which very imperfectly relieved it. The present proprietor determined to try what could be done by *tile drains*; accordingly he procured an accurate survey and level of the field, and employed experts to lay his drains, chiefly of *three-inch tile*, at distances varying from twenty to forty feet. This has been thoroughly done over the whole field. It was so early done, that the field was planted with the various kinds of vegetables cultivated in this vicinity. The increase of crop, over anything before produced on the same land, has fully paid the expense of the draining process in all its parts, leaving the land worth, at least, *three hundred dollars* per acre—being more than double what it would have before been estimated at. A specific account of the entire operation will soon appear in the Essex Transactions, now in press, and for which the first premium on underdraining was awarded by the trustees.

Other experiments were examined, of drains made of stones gathered from the land, but as these are not worthy to be named, where tile can be obtained, I forbear to speak of them in detail.

Our whole community are under great obligations to your brother French, for the very valuable instruction he has condensed on "Farm Drainage." If I do not mistake, he has pointed out the mode of increasing the value of Massachusetts farms more than any other single operation that has been named. I would give more for his underdraining process, than for all the "specific fertilizers" that were ever thought of. J. W. P.

South Danvers, Nov. 26, 1859.

For the New England Farmer.

EMPLOYMENT FOR WINTER EVENINGS AND STORMY DAYS.

FARMERS' OPPORTUNITY FOR MENTAL IMPROVEMENT.

With the majority of laboring farmers there is but little time left for intellectual improvement, after the weekly papers are read, during a large portion of the year, perhaps from April to October or November; but the long evenings of the remaining part of the year, and the stormy and severely cold days of Winter, when out-door labor is impossible or exceedingly unpleasant, afford opportunities for mental culture to every farmer, that should not be neglected. The value of these opportunities, if well improved, can hardly be over-estimated; yet, I fear their utility is poorly appreciated by many of our farmers. They are too often whiled away listlessly, resulting in no good, if not in positive evil, from habits acquired by idleness. I wish, simply, to remind those of my brother farmers who may need it, of the importance of these golden moments of leisure, and of what may be gained by a proper use of them. To young farmers, and to farmers' sons, would I especially direct the few words I have to say.

Seneca has remarked: "As the soil, however rich it may be, cannot be productive without culture, so the mind, without cultivation, can never produce good fruit." And if the soil will not produce good returns without some sort of cultivation, upon what known principle can we expect that the mind will come into that state of improvement that will enable us to act intelligently in all the matters of our every-day business, without some kind of cultivation, without effort on our part to that end? While we labor in cultivating the soil the greater part of the year, that we may reap

abundant harvests, during which time we necessarily find but a limited amount of time for study and reading, though excellent opportunities for reflecting upon what we may have already learned, and for putting the same to practical uses, why should we not eagerly seek, during the comparative leisure of the remainder of the year, for opportunities to improve the *mind*, the guide and director of all our operations?

Progress now seems to be the order of the day, in everything. We live in an age of inventions; in the age of steam and electricity; in an age when every one must be up and *stirring*, to keep up with his generation; and finally in an age when great improvements are made in every department of the arts, in a single generation. Improvements are made, and great improvements are to be made, in Agriculture; and the farmer, to keep up with his time, must keep thinking, as well as stirring. Agriculture is a vast subject, to which nearly all the Sciences minister. It is not merely to plow, and plant, and hoe, as our fathers planted, and plowed, and hoed, and to gather what chances to grow from such a course. Our lands in New England, by exhausting methods of culture, are becoming poorer, the virgin soils, in a great many instances, have been cropt to excess, and it is our business, then, to study methods whereby we may not make them hold their present condition merely, but improve them. To this end I would counsel the study of standard agricultural books, in these spare moments; take and *read*, perhaps, another agricultural newspaper during these months, and think, and devise experiments to be put into execution the ensuing summer; not to any ruinous extent, however, should they prove of no economical value, but moderately, and *perseveringly*, and so add your mite to the general cause. Agricultural reports of States and counties are of great interest and importance, and should not be omitted in agricultural reading. I need not remind you of your duties and *privileges* in the "Farmers' Clubs."

Several of the natural sciences are so interwoven with agriculture, as geology, botany, and chemistry, and perhaps I might add meteorology and mineralogy, that some knowledge of them is of great importance to every agriculturlist; and this knowledge is more easily acquired than is imagined by many. It is not above the capacity of any; and every farmer's son who has improved the opportunities for a *good*, common-school education, should not rest satisfied till he has devoted the leisure he may find in one winter at least, to the careful perusal and study of works on one, or more, of these sciences, which, in all probability, must create a thirst for higher attainments. Some knowledge of these sciences is quite necessary to read understandingly some of our agricultural books and reports; and ten dollars cannot be better expended yearly, by the farmer, than in the purchase of agricultural books, and papers, and scientific text-books. Take botany, for instance, the present winter, and make that a speciality, procure "Wood's Class-book of Botany," or some of Prof. Gray's botanical works, and in your leisure, master as many of its principles and terms as you can; then as spring opens seize the first flowers and apply them; in the few spare moments that you can find in summer, make a collection of plants for a *herbarium*, and my word for it, if your nature is in any wise like that of the mass of people, the pleasures you will derive from the science will amply repay you for all the hours of patient study, and serve as an incitement to further exertion. But do not be too hasty in your anticipations; if in two or three years, with the time you would naturally get, you can seize upon any wild flower of the field, and readily analyze the same, you have accomplished not a little.

And in geology, also, careful reading, from time to time, will put you in possession of much valuable information, and be a source of great profit and pleasure to you. And so with chemistry; time and *perseverance* will put you on easy terms with its elements and technicalities. Much time, however, will be required to accomplish all this, and a good deal of perseverance. But the advice I have given I know to be wholly practicable; and the attainments I have mentioned I know to be within the reach of almost any farmer, young or middle aged, who *wills* to possess them; and, in time, even much more than this may be accomplished.

And just here let me say, do not spend too much time over a certain New York "story paper," or similar publications—much worse than wasting time—when Nature is ready to reveal to her votaries truths so much stranger than fiction, and productive of such high and noble pleasures, and which may be rendered of much practical benefit.

History, biography, books of travels, and other departments of literature, as well as the topics of the day, should receive a share of the farmer's attention in this season of leisure. In our farming population there are not a few noble minds—minds that can appreciate whatever is beautiful that surrounds them, and are not insensible to the poetic charms of nature, that they come into contact with in their daily avocations; and I would say, every farmer's library should contain the writings of several of our best poets, and let *those* volumes, too, be well read.

Indeed, let not these long evenings go unimproved; they are the seed time of the mind, to New England farmers; and around their glowing hearths let refinement and intellectual culture find a place, and receive encouragement, as well as in the mansions of the anxious merchant and manufacturer. Let farmers' sons and daughters be educated, at academies and other public institutions of learning, if not too inconsistent with the farmer's circumstances, but at all events, let not the *home* advantages go unimproved. J. A. A.

Springfield, Mass., Nov. 11, 1859.

FARMERS' CLUBS.

The officers and members of Farmers' Clubs in this State, should be aware that the Commonwealth, by an act of 1859, proposes to assist, to some extent, such clubs already established, and to encourage the establishment of them where they do not yet exist. To avail themselves of this assistance, immediate official notice should be given to the Secretary of the State Board of Agriculture, in case of clubs now in operation, furnishing him *with a copy of their Constitution*, the number of members and times of meeting. In case there are individuals in any town, who are *dis-*

posed to form such a club, notice of the same should be sent to the Secretary of the Board, with a request, if there is any desire for it, to have the aid of some person familiar with the modes of establishing such organizations. Such a person will then be furnished by the Board, and his expenses paid from the appropriation referred to in the Act mentioned above.

EXTRACTS AND REPLIES.

USE OF PINE SAW-DUST.

I wish to know if pine saw-dust is of any use for bedding cattle at this time of the year? Is it any damage to manure thrown from the stable daily? Can it be composted to advantage? If so, how? Farmers here do not make any use of it; many say it is poor; some say, worse than nothing. It seems to me it is worth something.

North Orange, Mass., 1859. J. A. FRENCH.

REMARKS.—Where pine saw-dust can be readily obtained, we have no doubt but that it may be profitably used as an absorbent on manure heaps. We do not know that its precise value has been ascertained, and cannot, therefore, suggest how far it will do to team it in order to use it profitably. If we could procure it by hauling it one mile, we should not hesitate to use it freely.

—

PUMPKINS FOR COWS.

I will give you my experience in feeding cows with pumpkins. First, I fed my cows one week with one large or two small pumpkins to each cow twice a day. Their milk decreased two or three quarts to each cow a day, from what they gave the first week previous.

I then fed them one week with the same quantity of pumpkins as before, and took out the seeds. They increased in a greater proportion of milk than they decreased the week previous.

I then fed them alternately, three or four weeks, and they varied in their milk very much as the first weeks. A. CLARY.

Hartford County, Conn., 1859.

—

CHARCOAL—CORN FODDER.

MR. EDITOR:—The first question asked in all business pursuits in these days is, Will it pay? If once decided in the affirmative, then go ahead, and do it with a will; for in farm work, like all other work, what is worth doing at all, is worth doing well. Will it pay to haul pine charcoal, the burning of a large lot of pine lumber, four miles, to be used on the farm as a fertilizer? If so, in what manner can it be most advantageously applied? Can it be used in a compost with good swamp muck?

I have seen several articles in the *Farmer* in regard to harvesting corn. Some are for topping it, others for cutting it up by the ground. I have some years topped it, and other years cut it by the ground. This year I have done both ways, and can see no perceptible difference in the filling or shrinking of either; but I think the fodder on that cut by the ground worth more than double the same quantity left to stand and bleach. Others may do as experience teaches them best; but I think that no farmer, who gets his living by the sweat of his brow, can afford to lose so large a quantity of good feed. J. K. BURLINGAME.

North Providence, R. I., Nov. 17, 1859.

REMARKS.—Charcoal dust, usually found at the bottom of, and about coal pits, is valuable as an absorbent. A portion of it scattered over the manure heap twice or three times a week during the winter, would keep the barn sweet, and save valuable fertilizing agents that would otherwise float or flow away. Such dust is richly worth carting four miles.

—

IS DRAINING AN UNSETTLED THEORY?

Your somewhat witty correspondent in Winchester, "S. F.," concludes his strictures upon drainage by saying that the "subject of drainage" is, in his opinion, among the unsettled theories of the age. Now if S. F. will consult the Report of the Commissioners of Patents for 1858, Agriculture, under Improvement of Land, page 273, he will find a detailed account well worth reading.

Harvard, Mass., 1859. C. T. SAVAGE.

—

THE POOR MAN'S CAKES.

I take buttermilk, add a little saleratus and salt, stir in Indian meal, and a small proportion of wheat flour, so as to make it rather thick. I then fry them in fat, rather hot, and after making a sauce of cider and molasses, pass them over to my family, who eat them with a very good relish.

Suffield, Conn., 1859. MRS. BEEBE.

—

A LARGE PIG.

Mr. Daniel Howard, of West Bridgewater, fatted a spring pig which he killed on Monday, Nov. 28th, it then being eight months and twenty-seven days old, weighing, when dressed off, 420 pounds, beside sixteen pounds of fat taken from the caul!

THE COUNTRY CHILD.

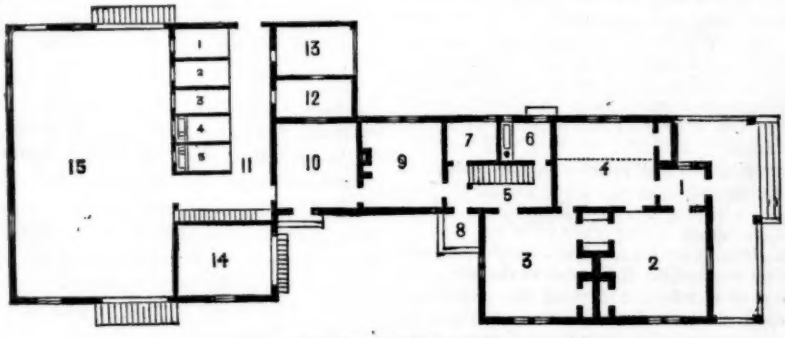
Child of the country! free as air
Art thou, and as the sunshine fair;
Born like the lily, where the dew
Lies odorous when the day is new;
Fed 'mid the May flowers like the bee,
Nursed to sweet music on the knee,
Lulled on the breast to that sweet tune
Which winds make 'mong the trees of June;
I sing of thee;—'tis sweet to sing
Of such a fair and gladsome thing.

AMERICAN STOCK JOURNAL.—This popular journal is devoted to the *Improvement of our Domestic Animals* throughout the United States. It is printed on large, clear type, and fine, white paper, and filled with articles valuable to those who are engaged in rearing stock, or for those who desire to know more in regard to the management of stock. D. C. LINSLEY, is the Editor and Proprietor; Dr. DADD, of Boston, attending to the Veterinary Department.

DESIGN FOR A SMALL FARM-HOUSE AND BARN.

We take great pleasure in presenting the readers of the *Farmer* with another of the just and beautiful designs of our accomplished artist, Mr. G. E. HARNEY. We have had it executed especially for these columns, and cannot doubt that its appreciation by our readers will amply compensate us for the considerable sum which it has cost.

What can be more truthful and attractive than this picture! How delightfully everything is arranged. How easy of access, how unpretending, and yet how many of the wants of a home, those little things that go so far to make up the substantial comforts of life, are supplied! How soft is the drapery of leaves and spray that shades and partially hides the buildings in the summer, or shelters them from the winter winds! The beautiful has much to do with our happiness, after all, and the beautiful home, the dwellings and their surroundings, must always have an important influence upon the family. Such a home will be remembered, and cherished, and visited by those whom business or other causes have compelled or induced to leave it, when a common and uninviting homestead would be utterly forgotten. This, that we present to-day, is one of the loveliest rural pictures we have ever seen.



PLAN OF GROUND FLOOR.

The artist gives us the following description:

The accompanying designs are intended to afford complete accommodation for a small New England farm—say from 15 to 20 acres in extent. The plan comprises house and barn, with woodshed and pig-sty all connected in one range, and having sheltered communication.

No. 1, is the front entry, 6 feet square; it opens into the parlor, No. 2, 14 feet by 15, and into a bed-room, No. 4, 12 feet by 15. No. 3, is the kitchen, 14 feet by 15, opening into the bed-room, back entry, and through a passage into the parlor. No. 5, is the back entry, 6 feet by 16, containing stairs to cellar and chambers. No. 6, is a pantry, 5 feet 6 inches by 8 feet, opening into the yard. No. 7, is a store-room, and No. 9 a scullery or back kitchen, 12 feet square. No. 8, is a porch over the rear entrance. No. 10, is a woodshed, connecting directly with the barn.

The barn is 40 feet square, and contains two horse and three cow stalls, No. 11, with a passage behind, and an opening to throw manure into the pig-sty, No. 13. No. 14 is a carriage-room, with double doors, opening into the yard, and No. 15 barn room for storage, 24 feet by 39. Room for hay is in the second story, which is well ventilated at the top. The stairs to the hay-loft are at the side of the carriage-room, and under them is a harness closet.

The second story of the house contains three bed-rooms, with a large closet to each, besides a large clothes' press in the entry.

Construction.—This design may be built of wood, and covered either in the vertical and battened manner, or in the horizontal manner, with narrow clapboards—the usual New England style.

The lower story windows, with the exception of the one in front, are all mullioned windows, shielded by hoods supported on brackets.

The dotted line on the plan represents the division between the main body of the house and the one-story addition.

Cost.—This range of buildings could be built for about $1500. G. E. H.

HOW TO DRIVE OXEN.

The *Rural New-Yorker* contains a very sensible article from the pen of Mr. S. E. Todd, of Lake Ridge, N. Y., on the important subject of driving oxen. He says that a good whip is the only proper thing to drive oxen with, and that neither a cudgel, a hand-spike, nor a pitchfork, should ever be used. The stock of the whip he wants not less than seven or eight feet long, with a small light lash of not more than two feet in length. Such a whip can only be used to guide the oxen by its light touches and skilful motions, and never to flagellate them. The following minute directions contain the philosophy of driving, and may be adopted in practice with decided benefit.

When driving a yoke of oxen straight forward, let the driver stand by the side of the near ox, say three or four feet from him, with his whip erect, so that both the oxen can see. Now, as the word *come along* is given, in a plain, open sound, just touch them both with the lash, on their rumps. Touch the slowest ox first. Now, keep the whip erect, as a soldier carries his musket when marching. When the word *whoa* is announced, let the driver stop short and speak distinctly, *whoa*. If he is not able to bring out this Yankéeism, in a round, full tone, let him speak the letter O, with an open, round sound—not drawl it out, nor snap it off, like the yelp of a wolf—and at the same time raise his whip and let the lash fall on the forehead of the ox that is least inclined to stop. It may be necessary, in some instances, to give an ox a blow with the lash, so that it will smart a little; but it is much the best to try a light touch with the lash first. Never keep the whip swinging over the oxen, and around their heads, when they are moving forward. In driving oxen that are very spirited, when they are going straight forward, and are inclined to go too rapidly, the driver should stand about even with the yoke, and put his whip forward of the heads, touch them lightly, and try to check their rapid pace with light blows. If they become too impetuous, give them the word whoa, and stop, and then start onward again for a short distance. But spare all the hard blows with the lash until there seems to be no efficacy in gentle touches with it. Never keep up an incessant *whoa, whoa, whoa*, in order to make any team walk more steadily, and with less rapidity.

When it is desired to have oxen *gee around*, let the lash drop on the buttock of the near ox, immediately after the word is given to *gee around*, and let the driver step forward, near the head of the near ox, and make a motion to the off ox to back. If the off ox is not inclined to *gee*, touch him with the whip, on the left shoulder. If the off ox dashes ahead too much, touch him lightly on the head, and touch up the near ox, behind, with the lash. To *haw them around*, let the driver step back opposite the tails of the oxen, and give them one word, *haw around*, and at the same time touch the near ox with the lash on the forehead, and the off ox on his rump. If the near ox does not *haw* as much as he ought to, by touching on the head, give him a blow with the lash over the shoulders, so that the lash will strike on the right shoulder. As soon as oxen have become accustomed to the words of command, and touches of the whip, they will obey very promptly, with only the motion of the whip, without touching them. Oxen will notice the motions of a whip, and the motions and words of the driver; and if they are always made intelligently and understandingly, oxen will very soon learn to step to the mark with all desirable promptness. A swing of the whip from near the rumps towards the heads of oxen, when the driver is standing by the side of the near ox, they will very quickly learn means to go forward. But if the driver drops back, as they are going forward, and swings his whip over the oxen in a diagonal direction, from over the rump of the off ox, towards the head of the near ox, well trained oxen will immediately *haw*, if not a word is uttered to them.

When a driver walks or rides behind his oxen, a swing of the whip, over the oxen, from right to left, or a touch on the forehead, or right shoulder of the near ox, and a touch with the lash on the buttock of the off ox, will always make them *haw*; while a touch on the forehead and left shoulder of the off ox, and a touch at the same time on the

buttock of the near ox, will make them *gee*. But the words of command should always precede the motions and touches of the whip. It is very seldom necessary to strike good oxen a smart blow with a whip; and raw hands should always be very careful how they touch their oxen, and above all, how they strike them. It is always attended with no good consequences to whip any oxen, unless we know they are in the fault, and know how to obey better; and when oxen are very spirited, they will always obey infinitely better with a gentle touch of the lash, and a good round word of command, than with all the whipping and yelling that a boisterous teamster is able to bring out on the occasion. Whipping obedience into spirited oxen, is not unlike Aunt Chloe's whipping her refractory boys; "while she whipped out one devil, she whipped seven more in." Let young ox-drivers always be taught to spare the whip, and to give the words of command correctly, and the proper touches of the whip.—*Homestead.*

For the New England Farmer.

"IS THERE ANY PROFIT IN FARMING?"

MR. EDITOR:—It will, without doubt, be recollected by many of your readers that I wrote an article, which you were kind enough to publish in the *Farmer* of Aug. 20th, with the above caption. The position which I took in that article will also be recollected, viz., that farming in New England is not a paying business; that the public, and even the farmers themselves, to a large extent, are deceived in the matter. This I undertook to show with what logic I possessed; also, I gave some statistics, and a few quotations from what I deemed good authority, to prove my position.

Now, I must in candor say, that when I penned that article, I supposed it would be replied to, if at all, by just that class of farmers of whom I spoke in the article, who, having "money to spend," &c. &c., consider this as a good business.

It will, perhaps, be as well for me to state in the outset, that I intend in this article to reply to my "Springfield" friend, who undertook, in the *Farmer* of Oct. 22d, to review the article to which I have above referred, and to show that farming *is* profitable.

It is an old saying, and a very good one, that "circumstances alter cases." As this is one of the "cases" that "circumstances" have altered, and as but a very small proportion of the farmers can be located in a thrifty and growing city, comfortably, pleasantly, and, for the sake of the argument, and for nothing else, profitably if you please, at farming. Springfield is situated on the banks of the Connecticut River, in Hampden County, in this State. It is a city of some 15,000 inhabitants, and is at this day making great progress in wealth and population. The Western Railroad passes through this place; the United States Armory is here located, which adds largely to the thrift of the city, also factories of various kinds are in successful operation. Further, the soil on the banks of this river is well adapted to the growing of tobacco, and large quantities of it is put to this use. Here, also, land is sold by the foot. Is it necessary for me to look any further for the solution of the argument of my friend J. A. A.? What say you, brother farmers, all over New England? If your ancestors had left you the broad acres in a great and populous city, how monstrously "profitable" farming would seem. Do store and other bills accumulate, and the crops come in light? Have you become worn out by hard toil, and the doctor's bill looks you in the face? Have the wife or the little ones been on the sick list, too? Or, is it necessary to send the boy to college? A few corner lots will harmonize the whole. What a beautiful thing farming is.

Now, Mr. Editor, I suppose I must take up your correspondent's article, somewhat systematically, and treat of it as he goes along. In the first paragraph, he says the writer "must be located in a very ill-favored portion of the country." In the old town of Chelmsford, joining Lowell, the second city in New England in wealth, population and enterprise, (saving tobacco—we don't grow the weed here, we profess to be a moral people,) is the writer's residence. Of the capabilities of the town in the agricultural line, perhaps I can give it in no better way than in the language of one of its most distinguished citizens. Dr. Bartlett, in a lecture before the Agricultural Society of this town, said, "that in his opinion, not a farmer in town was getting a living, without he had either fruit or wood to sell." Now, although Chelmsford produces a large supply of both of these articles, and there are but few farmers who have neither to sell, so that on the whole, this may compare favorably with most farming towns, yet, with all the privileges that this has over most places, even here it is up-hill work. The truth of the matter is just here—that no farmer could, for any considerable length of time, sustain his position, were it not for the outside helps that he is constantly obliged to resort to. He must have capital, and it is folly to think to farm without it. Then, this capital is dead property, for with this, he has to combine a larger amount of labor and economy than would give him a better living at many of the trades that are in vogue, that are much more easily attained than to know how to farm. One of two things is true; the farmer has to relinquish all hopes of any per cent. on his capital, or throw away his labor to get a fair per cent. on his investment. Does any one believe that a man can take a farm and its appendages entirely on credit, and pay his interest, and in the course of time, free himself from his liabilities, and retain the farm? This is what a large proportion of those engaged in other pursuits are constantly doing.

If my friend "J. A. A." will be kind enough to stop guessing, and go into the figures, the facts, as they actually exist, and from these obtain or arrive at his conclusions, he will be quite as likely to be correct. This guess work should be abandoned, and facts and figures should take its place. Now if "J. A. A." has made a fortune at farming, or any considerable portion of one, he has the ability to tell how it was done. This would do much to establish his position. In this State, there are 35,000 farms, and allowing two men to each farm, would give 70,000 farmers, equalling in numbers all other trades. If "J. A. A." will find one solitary individual (Springfield included,) out of this army of farmers who has for a series of years made fair mechanic's wages over and above a reasonable per cent. on his investment, at farming, then I shall learn something that I never before have seen. And, unless he can do this, and

much more, then his whole argument falls to the ground.

Perhaps I can illustrate the position I take, in no better way than by relating an anecdote, which was recently told me. A friend of mine who takes a similar view of the matter with me, said "he had been several times opposed in his view by a stout and rugged old farmer who instanced his own case to prove that the business was lucrative." "Well," says my friend, "you have made money, have you?" "Yes, I have done well, and I know it is a good business. But, what are you figuring about?" "I was merely reckoning up to see how much you have made." "I guess I know how much I have made without your figuring." "Well, well, I merely wanted to see; figures, you know, won't lie." "Well, how do you make it?" "Do you want I should tell you?" "Certainly, you can't alter it." "Well, then, if I have got it right, you lack $60,000 of having made a living." "How do you make that out?" "You say you had so much (showing him the figures) left you?" "Yes." "You are now worth so much?" "Yes." "Well, then, if you had put your money at interest when you came into possession of it, and kept it there, and got your own living since, you would have been worth what I told you."

Now if my Springfield friend will furnish the evidence of what he says, and will truthfully make it appear that this is "profitable, and that farmers are the most independent people in the world," it is all I ask for. I think, however, that where we mainly differ is in this—he has one class of farmers in view, and I another. It is the poor farmer whose position I am speaking of, and not these city folks who farm for amusement, without regard to the cost.

Again, friend "A" says; "I suspect that Mr. P. having probably been employed in other pursuits before engaging in agriculture 'some seven or eight years' since, may possibly be lacking in agricultural experience, so necessary to success, and has had the misfortune to locate in a bad situation, both combining, perhaps, to render him sick of his new vocation, and consequently he looks upon the dark side." Here is more guess work, at which friend "A." has been about as successful as he is in guessing at the "profit" of farming. The truth is, I am not "sick" of farming, nor have I "located in a bad situation." All that I want, is, that the truth and right may prevail. When I see all other classes of men making a living by their business, and generally much more, (which I do not object to,) I am led to inquire how is it with the business that sustains all others? I would not say a word, did not I believe that there is a remedy for the wrongs that I am speaking of. But, it is no use to say a word about a remedy till we understand our position, and if things are all right, then let them remain.

Again, "a good cow should give four quarts at early milking, at least, or eight quarts per day, through the greater part of the year, and even more than this, a considerable portion of the time." I believe a cow may be kept well, in most localities for about forty-five dollars per year, and should yield an average of six quarts of milk per day. "The milkmen generally get from four to six cents a quart for milk, and, consequently, the farmer should not receive less than three or three and a half cents for his milk, at his door." Now this is all guess work again, and you have not given a single fact to substantiate a word of what you have said. A cow that gives milk, requires 2½ per cent. on her live weight per day of good English hay or its equivalent to sustain her position. Is this keeping her for forty-five dollars per year? The farmers have been selling their milk for eighteen cents per can in this county, and in New Hampshire on the line of the railroads, this last summer. The cans hold, Massachusetts measure, from nine to eleven quarts. Is this "from three to three and a half cents per quart?" No supposition, or guess work here. Now, if friend "A," can put these items together, and figure up a "profit," I am thinking it would take a larger city than Springfield to hold him.

Chelmsford, Mass., Nov. 7, 1859.

T. J. PINKHAM.

AMERICA'S NOBLEMEN.

The noblest men I know on earth,
Are men whose hands are brown with toil;
Who, backed by no ancestral graves,
Hew down the woods and till the soil,
And win thereby a prouder fame
Than follows king or warrior's name.

The workingmen, what e'er their task,
To carve the stone or bear the hod—
They wear upon their honest brows
The royal stamp and seal of God!
And brighter are the drops of sweat
Than diamonds in a coronet!

God bless the noble working-men,
Who rear the cities of the plain,
Who dig the mines and build the ships,
And drive the commerce of the main—
God bless them, for their swarthy hands
Have wrought the glory of all lands!

NEW PUBLICATIONS.

THE FREE SPEAKER; A New Collection of Pieces for Declamation; Original as well as Selected, intended as a Companion to "The Hundred Dialogues." By William Bentley Fowle. Published by the Author. 1859.

This book is intended for our common schools, and ought to be in use in every one of them. The pieces of which it is made up, as compositions, or examples of terse and vigorous English, are, as a whole, scarcely equalled by those of any school-books now in use; while their sentiments inculcate that love of justice, of freedom and country, which no other school-book has ever yet dared to do. They also everywhere urge that no earthly power should ever, for a moment, be interposed to alienate or compromise our direct, personal duty to God. All profit, pledge and expediency, must yield to duty to the great Head and Source of all.

Our school-books are, most of them, tame and savorless things. They exhaust the strength and patience of the pupil in obtaining a fluent and melodious elocution, while they ought to press home upon the heart those sentiments of justice and duty which will make even the unlettered person eloquent. The "Free Speaker" has the happiest combination of both. While it breathes the spir-

it of philanthropy and love on every page, it also utters that Puritan sternness for right that never compromises with wrong.

In its appropriate branch of learning, the schoolbook should not only teach the child how to declaim, but at the same time something of the nature of the laws and government under which he lives,—of agriculture, of the sciences and arts,—and especially, of those principles which impel and make prosperous a free and virtuous people! A mercenary thought underlies the publication of too many of our books: the question being, *how* will it sell, and *where* will it sell, so that the larger half of our population, who are right, have no book yet that speaks for them.

The Free Speaker has two or three features of importance. One is, that the pieces are all new, and not the hackneyed ones that have been worn threadbare for the last half century. This is a matter of consequence to those who speak in our schools. The other peculiarity of the book is, that about one-quarter of the pieces are original. The pieces are all single. We hope the "Free Speaker" will have a widely-extended use; and if so, good men and good women will be greatly multiplied in the land.

LETTER FROM WESTERN VIRGINIA.

Farmers and Farming—Great Products of Corn, Potatoes, &c.—The "Institution" fading away—Yankee Influence—Soil and Climate—Progress in Ceredo.

Ceredo, Va., Oct. 24, 1859.

Since I have been here, two years and above, and taken some pains to make observations on the subject, I am able to offer some testimony as to the productiveness of the soil in this section. I find the effects of the "institution" here, where there is no slavery comparatively. The most intelligent residents themselves will tell us, that they do nothing at farming, because they do not try—they are too lazy, and have been taught from childhood that only slaves should labor industriously and constantly; so if they wish to produce any crops, they hire some one to cultivate the land for them, or rent it out to some one poorer than themselves, and neither of them make a living. This is the case with a majority of landholders in this county. So that when a stranger rides along the highways, he will see only a few attractive farming operations, and would not be favorably impressed with the quality of the soil.

The neglect to cultivate the soil, and in fact the neglect to do anything in season, or as well as it should be done, is so generally the practice, that farming makes a poor show. However, there is here and there a farmer who does the best that can be done for profit and for his land. A farmer, two miles from this, who this year cultivated about one hundred and fifty acres of land, shows what *can* be done in the way of large products.

On a piece of hill land where his predecessor could not get a living, he raised corn at the rate of eighty-five bushels to the acre. I saw some of it before it was cut. I could not reach the ears on the stalks, and many of the ears are more than one foot in length. I heard of stocks seventeen feet high, and ears of corn sixteen inches long, but did not see them. The same farmer, however, has one piece of corn of fifty-six acres, on which he has raised fifty-six hundred bushels of corn. He is a systematic, energetic farmer, and goes in for improved machinery, and all the best farming tools, and so he makes four times as much as his neighbors, who attribute his success to the use of capital!

I was going to tell what I had seen of the products of the soil. I saw an acre patch of melons, from which the proprietor had sold $200 worth of melons, and there were three to five hundred yet on the ground. The ground was scratched up once, and the seed put in—that's all. In spite of such bad treatment, the ground produced enormously. The same man had sweet potatoes growing on an adjoining piece of land, and they turned out at the rate of more than 250 bushels to the acre—or if you wish to have me exact, the ground which I measured was five feet long, and two feet wide, and the product was more than a bushel and a half. Some of them were very large, and all very good—the best I have ever eaten.

Apples and peaches grow without care or cultivation, of the best quality, and very large. Many orchards bear the Rome Beauties, as they are called, year after year, the trees yielding from five to eleven barrels each. These apples are very fine flavored, mature about Christmas time, and are a general favorite in the Ohio Valley. Thousands of barrels go down the river every year. Another very excellent apple, ripe now, and not good to keep, is what is called the "Blue Pearmain." The specimens I saw—a lot of thirty bushels—would more than half of them measure twelve inches in circumference. They are very rich flavored. But little fancy fruit, cultivated with the greatest care, could be better. There is a peach orchard on the mountain side, thirteen miles from here, where the trees have borne every year without fail for twenty-four years. They have had little care, and have never been trimmed out.

It would not be worth while, perhaps, to particularize the mammoth turnips, beets, sweet potatoes, &c., for you have such things at your agricultural fairs; but they are so common as not to excite admiration, and they grow without the expense of cultivation required in a different climate.

Wherever a Yankee has cultivated the ground, he has got such returns as excited his special wonder, and fixed him here for good. One who purchased a farm six miles from here two years ago, for four dollars and fifty cents per acre, was laughed at for paying so much for the "worn out" farm. I could see that he knew what he was about he knew a farm which was never cultivated could not be worn out; and now, the men who laughed at him begin to think he knows something; and that same Yankee has now as much influence, and his advice is sought as often as that of any other man in the neighborhood. He had only been at work eighteen months, when his nearest neighbor, an old man and a slaveholder, made up his mind to sell his best "cash niggers." So five of them were at once disposed of, and he has only little nigs, and feeble, or females, for help in the house. He "reckons" he can cultivate his farm as cheap by free labor, and has not anything to say against Yankees, as he did at first, supposing they were

all abolitionists, as he said. The Yankees who coolly go to work in their own way, without regard to custom or precedent, are a puzzle to the Virginians. They soon see the advantage of certain modes of doing things, however, and are not long in adopting what appears to be the best method of managing a farm.

Such is the influence already exerted upon the most intelligent of our neighbors. Without any design or desire to influence them or meddle in the affairs of others in any way, the Yankee farmers went to work in their own way, and the result of their labors was sufficient to convince any but a fool, that the soil had been trifled with, and that a climate that would furnish green beans five months in the year, was good enough for anybody with brains.—*Boston Journal.*

THE STATE BOARD OF AGRICULTURE.

This Board met at the State House Nov. 29th, and continued its sittings three days. Hon. MARSHALL P. WILDER presided over its deliberations. The subject of the formation of farmers' clubs, and the act of 1859, was taken up and discussed at some length, when a committee was appointed to consider the act in relation to the formation of said clubs. This committee, consisting of Messrs. BARTLETT, FISHER, BROWN and GRENNELL, subsequently reported: That the chief, perhaps the only object, attempted at this time, should be the establishment of farmers' clubs, and the aid of those already established. They did not recommend details, but advised the appointment of a committee to carry out the provisions of the act, and recommended that the plans, constitutions and by-laws of the various farmers' clubs *already* organized, should be as much in uniformity as possible with those hereafter formed. They also advised that each member of the Board should give notice in the several towns within the limits of his society, of the desire of the Board to establish farmers' clubs, and of the benefits to be derived from them.

Reports of the delegates to the county societies were then read and discussed.

SECOND DAY.

Reports of delegates were continued. Upon the motion to accept one of these reports an animated discussion ensued, which assumed a very interesting character.

Mr. DAVIS, of Plymouth, moved that the reports be *not* printed. He thought much that was seen and said would have no public interest, and while they might be important in repeating details to the Board for their information, yet a delegate would not wish to utter it, if it were to go out before the public.

Mr. GRENNELL, of Greenfield, thought it best to administer reproof, when needed, in private, by way of suggestions to the officers of the societies, where it would ordinarily do more good than through the medium of a public printed report.

Prof. CLARK, of Amherst, expressed the opinion that the report of a delegate, if properly prepared, was a document of permanent value as a means of comparison and reference in future, and, as such, worthy of publication.

Mr. BROWN, of Concord, thought it well that the delegate should give his ideas and recommendations with reference to the exhibition he had witnessed, but that *the Board itself* should express some decided opinion upon the practices and customs criticised or commended, in the form of a resolution, or some other mode of expression, so that the farmers of the State may learn what opinions the Board entertain with regard to the modes of conducting the exhibitions in the several counties.

Mr. BROOKS, of Princeton, hoped the printing of the reports would be discontinued, unless the Board should adopt the plan of discussing them. Dr. FISHER, of Fitchburg, was in favor of printing.

Mr. LEWIS, of Framingham, said the reports occupied on an average only about a ninth part of the whole volume. They are its most valuable parts, and are wanted as a means of comparison. Messrs. BARTLETT, CLARK, DAVIS, ATWATER, FELTON, and others, continued the debate at some length, and then the motion not to print was laid upon the table.

The subject of holding a *second State Fair* was committed to a committee of five, who subsequently reported that a fair be held in September next, at such place as will furnish the best accommodations and the necessary guarantee fund.

Messrs. BARTLETT, CLARK and BULL were elected a committee to carry out the provisions of the act in relation to the establishment and encouragement of farmers' clubs. See chapter 203, Massachusetts laws, 1859.

Messrs. WILDER, BROOKS, BULL, SUTTON and ATWATER were elected delegates to attend the annual meeting of the United States Agricultural Society at Washington, on the second Wednesday of January next.

THIRD DAY.

Board met at ten o'clock. The subject of the returns of circulars, and the reports upon them by the several committees, was discussed, and it was ruled that the answers of the circulars should be compiled by the respective committees, and their contents reported at the annual meeting of the Board in January next.

Nearly all the members of the Board were present, and they manifested a deep interest in the subjects presented for consideration.

For the New England Farmer.

WHAT A COW CAN DO.

MR. EDITOR:—Having seen various statements, for several years, in your journal, of the quantity of milk given by different cows at stated periods, I am induced to send the statement of two years' doings of one that I have owned for the last five years, but lost in calving a few weeks since. She was said to be one-half Native and one-half Durham, or Short-horn. Her appearance warranted the latter, at least. Living in the city, I could make no dependence on pasture, but have had to depend on what I gave her in the barn. You will see, she gave the most milk the first year. I account for this in two ways. I milked and fed her myself, and I am satisfied I can make more milk, (with the pasture *I* had,) to have my cow calve in the winter or fall, when I can feed cut feed, roots, rowen and oil meal, alias flax seed, than I can on grass, when I cannot add the former. I am not one of the fortunate ones who are able to make large quantities of milk on grass alone. I could not obtain the latter, and therefore had to find substitutes, or rather auxiliaries, and plenty of them. I have often heard it advanced that cows giving *large* quantities, could not give *good* milk. In answer to this, I will say,—one season when she was farrow, I took the cow into the country where my family were staying, from July to October, when she was giving, on an average, nine quarts daily; after using all we wanted in the family of seven persons, my wife made over seven pounds of butter per week for fourteen successive weeks, which I think is proof positive that her milk was A 1. The most she ever gave me in twenty-four hours, milked 6 A. M. and 6 P. M., was twenty-three quarts, one and a half pints. Thus:

1856.—Took calf away Feb. 1st.	*Qts.*
Amount of milk, Feb. 1st to Aug. 1st	2459
" Aug. 1st to Feb. 1st	1928
Number quarts one year	4387
4387 quarts, at 5 cents per quart	$219,35

1858.—Took calf away July 1st.	*Qts.*
mount of milk, July 1st to Jan. 1st	2239-2
" " Jan. 1st to July 1, 1859	1683
Number quarts one year	3922-2
3922-2 quarts, at 5 cents per quart	$196,12
	$415,47

All the milk not used in the family was sold at a store, at 5 cents per quart the year round; many carts selling at 6 cents through the year.

H. R. CONGDON.

Providence, R. I., Nov., 1859.

THE GARDEN.

The garden is a bound volume of agricultural life, written in poetry. In it the farmer and his family set the great industries of the plow, spade and hoe, in rhyme. Every flower or fruit-bearing tree is a green syllable after the graceful type of Eden. Every bed of flowers is an acrostic to nature, written in the illustrated capitals of her own alphabet. Every bed of beets, celery or savory roots, or bulbs, is a page of blank verse, full of *belles lettres* of agriculture. The farmer may be seen in his garden. It contains the synopsis of his character in letters that may be read across the road. The barometer hung by his door will indicate certain facts about the weather, but the garden, laying on the sunny side of the house, marks with greater precision the degree of the mind and heart culture which he has reached. It will embody and reflect his tastes, the bent and bias of his perceptions of grace and beauty. In it he holds up the mirror of his inner life to all who pass; and, with an observant eye, they may see all the features of his intellectual being in it. In that choice rood of earth he records his progress in mental cultivation and professional experience. In it he marks, by some intelligent sign, his scientific and successful economies in the corn field. In it you may see the germs of his reading, and can almost tell the number and nature of his books. In it he will reproduce the seed-thought he has culled from the printed pages of his library. In it he will post an answer to the question whether he has any taste for reading at all. Many a nominal farmer's house has been passed by the book-agent without a call, because he saw a blunt negative to the question in the garden yard.—*Elihu Burritt.*

For the New England Farmer.

FRUIT CULTURE.

MESSRS. EDITORS:—In Hovey's Magazine for November, the editor, speaking of Fruit Culture, says: "It has been remarked by some horticultural write that *all fruits* succeed best in the localities where they originated." This I am not willing to admit. I am not aware of any writer who asserts that "*all fruits so succeed best*," &c. But as regards apples and pears, particularly the former, this is affirmed by many; thus, in a report which appeared some years since in the Essex Agricultural Transactions, upon the apple, the writer recommends the cultivation of those varieties which are indigenous, or have been first grown upon our soils, having for many years observed, that the best apples in our markets were generally those sorts which were first produced in New England.

Henry Ward Beecher, writing from the West a short time after, in corroboration of this, remarked that the best apples in the West were those varieties which originated in the "Great Valley." With us, the Hubbardston Nonsuch, Baldwin, Roxbury Russett, Mother, Porter, R. I. Greening, Minister, Danvers Winter Sweet and Hurlbut, are among our best fruits, while the Newton Pippin, Esopus Spitzenberg, Red Doctor, Pennock's Winter and Red Gilliflower, fruits which are first-rate when grown in their native habitats, are inferior when grown here. It has been said that the Porter and Baldwin are nowhere so good as in Massachusetts; while the Newton Pippin is best on Long Island, and the Spitzenberg in Western New York. Mr. Van Buren, of Georgia, says "I have in my orchard the Spitzenberg, Newton Pippin, Minister, Peck's Pleasant, Vandevere and the Swaar; these northern varieties, although making a good growth, yet for twelve or fourteen years producing not more than a dozen, or half a dozen specimens to each tree, annually, while all our *native varieties*, bear good and abundant crops in from three to five years after transplanting."

The same may be said of our imported kinds generally, with the exception of the Gravenstein, of Germany, and the Ribstone Pippin, of England;

the former succeeding as well as many of our varieties, and the latter, if in a rich and moist soil.

With regard to the pear, he says, "The history of pear culture does not confirm this," adducing the Bartlett as an example. I admit that the Bartlett pear tree will assimilate to itself materials for an abundant crop in almost all good soils; in fact, I hear of its successful culture throughout the country, more so than in any variety of the apple, while the St. Michael, St. Germaine, and some other varieties of the pear, cannot be grown here successfully. That the cultivation of this fruit "is yet in its infancy," as said by this editor, I admit, —hence it is impossible to say, as yet, how much this idea of locality, as said of the apple, will apply to the pear. J. M. IVES.

Salem, November, 1859.

For the New England Farmer.

MISCELLANEOUS OBSERVATIONS

On Farmers and Farming, and Changes of Custom since the Revolutionary War.

MESSRS. EDITORS:—My first lessons at farming were taken while with my father;* he was the proprietor of three or four hundred acres of land. He emerged from the revolutionary war, like many other revolutionary officers, as destitute of money as the gambler who has lost his last dollar. He was a member of the Provincial Congress in the years 1774 and 1775; he was in the Concord fight, and held the commissions of major and colonel of the 7th regiment of the State forces during the whole war. He sold part of his farm, and finally had to take his pay in the paper currency, which had depreciated so much, that the purchaser boasted that one load of wood sold from the lot, discharged the whole debt for the land. After peace was declared, he began to apply himself to farming operations like one awakened from a dreamy maze. His fences were poor, bushes and brambles were trespassing upon his tillage land, taxes high, a scarcity of money, and the gloom from the reaction which took place consequent to the long continued war excitement, were obstacles which must be met without flinching, or all must be lost. The poverty of farmers at that period was distressing; men possessing good farms, who had been engaged in the war, were necessitated to neglect their farms for the want of help to do the labor. The owner of a good farm, and a worthy man, came to my father in distress for bread for his numerous small children, and asked his advice what he should do, and said he was afraid they should all starve.

These times were soon followed by Shays's insurrection, caused by government oppression to force people to pay taxes and debts, who had nothing. I can distinctly remember that gloomy time. Those people who were not able to make their own candles, collected pine knots and made splinters for illuminating their unpapered, unpainted, and almost unlighted rooms, which were the darker for the nightly fumigation of the burning torches. What little clothing the country people wore consisted of cloth of home manufacture, produced from articles raised on the farm, or from cloth of home facture, bartered for foreign goods. If there was a man in town who wore broadcloth, he was a subject of general remark, accused of extravagance, and an object of envy. The young ladies of the best families turned out to meeting with their home-spun linen gowns, and many of the young men with patches on the knees of their pants. I have known the mothers of blooming young ladies strap on to their horses' saddles cloth of their own manufacture, and ride fifteen or twenty miles to Charles' Ferry, and leave their horses at Charlestown, and pass over to Boston in a ferry boat with their merchandise within their arms, and then traffic it away for a little calico, or other gewgaws to decorate their fascinating daughters.

The period from the close of the revolutionary war to the commencement of the revolution in France, was a gloomy, distressing one to farmers, which "tried men's souls." The revolution and wars in France and the rest of Europe caused a sudden impulse in the business part of the community in this country, which revived the desponding farmers. Every article of farm production took a sudden rise, and the demand was such, that from a kind of despairing lethargy, the farmers waked into new life, and in a few years paid their taxes and other debts, and began to buy land to enlarge their farms, which caused a rise that eventually led to disastrous land speculations.

The period from the French revolution to the British "orders in council," Bonaparte's paper blockade and the embargo, was a very prosperous one to farmers. Foreign goods began to be imported in abundance, people began to dress better, and a broadcloth coat was not of such singular occurrence as to excite all kinds of feeling but good ones.

The period from the embargo to the end of Mr. Madison's administration was anything but a pleasant one, especially for the inhabitants of our cities. The complaints of the people all along the sea-coast were really distressing. Tne ladies retreated back to manufacturing their go-to-meeting plaid gowns from factory-spun yarn, and other branches of economy were substituted, in contrition for former extravagance.

The period from the treaty of Ghent to the present time, has been one big with astounding events. Steam navigation, the sudden mushroom growth of manufacturing cities and railroads, the invention and improvement of all kinds of agricultural implements, will equal the periods of any age, or the improvements of any nation. But the extravagances, swindling operations and various other rascalities will defy the enormities of all Christendom, the heathen lands and the cheats of the whole world.

I stated above, that my first lessons at farming were taken while with my father, and of course in the last century. His home farm contained about 200 acres of undulating land, and not stones enough on the whole to make a rod of wall. He kept about twenty head of horned cattle, two horses, a flock of sheep, and more or less swine. He covered his barn-yard six or eight inches deep, with rich loam, and rye straw for the cattle to sleep upon during the summer, which he plowed occasionally, to have it well mixed. In the month of November, this compost was carted and spread upon his runs, or swales, where he obtained the most of his English hay. His winter manure was mostly applied to his potatoes and hops, and the residue spread upon his corn fields. This land was warm

* Jonathan Brown, Esq., of Tewksbury.

and dry, and he seldom put dung in the hill for corn. He obtained the most of his grain from the natural strength of the soil. He planted his potatoes on the damp land, and manured in the hill, and I have helped to dig potatoes there, that produced a peck to the hill, where now it will take twenty or thirty hills to fill a bushel. Thus my father went on, he growing richer, while his land was growing poorer, and in a few years he doubled his property, as we supposed, and bought other farms for the sons that remained at home. This is a specimen of farming of the last century.

Many of our city friends, unaccustomed to country life, form erroneous opinions of farmers and farming; they judge according to appearances, and, therefore, do not judge a righteous judgment. They judge the farmer by the cloth he wears, and the starch he does not wear, and conclude that farming has rather a degrading tendency. It is true that some clownish characters are engaged at farming, but not more in proportion to the number than we shall find in all other professions and occupations, when we come to look under, perhaps, the better cloth that covers them. Farmers worthy of the name take the "papers," and are well posted up on the interesting affairs of Church and State. The farmer has the whole horizon for his office; he is not confined by bricks and mortar to a narrow compass to the injury of his health and contraction of his mind. Farmers in country towns are generally the rulers of the towns; they pay the most of the taxes to support the poor, to build school-houses and to pay teachers for instructing their own children, and the children of those who do little else than help vote away the farmers' money for their own benefit.

The most of this piece was written on the day that completed my eighty years of experience in this world of sin and suffering, good and evil, hope and despair. If you find any soft spots in it, exercise that charity which the aged naturally claim.

SILAS BROWN.

North Wilmington, Mass., Nov. 11, 1859.

REMARKS.—An exceedingly interesting letter, and a wonderful performance for that age.

NEW PUBLICATIONS.

DADD, on the Nature and Treatment of the Diseases of Cattle, with Descriptions and Illustrations of the various Organs and Functions of the Animal Economy. Containing, also, Useful and Practical Information on Breeding, Ventilation, and Diet. By George H. Dadd, Veterinary Surgeon. Boston: John P. Jewett & Co.

Dr. Dadd thinks the common inquiry among farmers has heretofore been, "How shall we protect our property [stock] against the ravages of diseases?" But that the more important question is, "How shall disease be prevented?" The latter is, certainly, the view for us all to take. A proper care of stock will prevent most diseases; and even when it has invaded the system, nature, left to herself, will ordinarily do more to effect a cure than all the nostrums of the shops. Dixon expresses it better than we have; he says—"Nature is ever busy, by the silent operation of her own forces, in curing disease; her medicines are air, food, water and rest." That is, food that the natural appetite desires, and rest. Warmth and repose, with the recuperative action which the animal inherently possesses, will usually bring health, unless the system has been grossly abused.

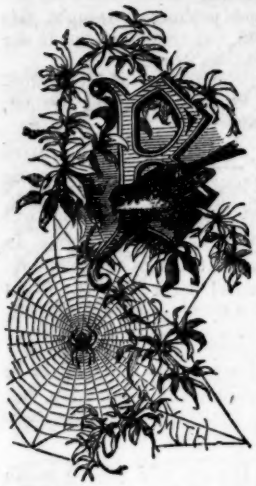
This work treats of the following subjects: Diseases of the Organs of Respiration; and of the Digestive Organs; on the Principle of Breeding; Parturition, or Labor; Diseases of the Generative and Urinary Organs; the Heart—its Functions and Diseases; Diseases of the Eye and its Membranes; Ruptures; Diseases of the Bones; Rheumatism, Acute and Chronic; Diseases of the Liver, Brain and Skin, &c. These topics are treated, generally, in an understandable manner, though we think if there were less of the technicalities of the profession, the book would be more valuable. The Doctor's mode of treatment is moderate and consistent, compared with some of the "fire and brimstone" treatises that have preceded it. The book is finely printed, thus showing a proper regard for human eyes as well as the health of stock, and ought to be owned by every person keeping a dozen head of cattle.

INSECT LIFE IN CEYLON.

Owing to the combination of heat, moisture, and vegetation, the myriads of insects in Ceylon form one of the characteristic features of the island. In the solitude of the forests, there is a perpetual music from their soothing and melodious hum, which frequently swells to a startling sound as the cicada trills his sonorous drum on the sunny bark of some tall tree. At morning, the dew hangs in diamond drops on the threads and gossamer which the spiders suspend across every pathway; and above the pools, dragon-flies, of more than metallic lustre, flash in the early sunbeams. The earth teems with countless ants, which emerge from beneath its surface, or make their devious highways to ascend to their nests in the branches. Lustrous beetles, with their golden clytra, bask on the leaves, whilst minuter species dash through the air in circles, which the ear can follow by the booming of their tiny wings. Butterflies of large size and gorgeous coloring, flutter over the endless expanse of flowers; and frequently the extraordinary sight presents itself of flights of those delicate creatures, generally of a white or pale hue, apparently miles in breadth, and of such prodigious extension as to occupy hours, and even days, uninterruptedly, in their passage—whence coming, no one knows; whither going, no one can tell. As day declines, the moths issue from their retreats, the crickets add their shrill voices to swell the din; and when darkness descends, the eye is charmed with the millions of emerald lamps lighted up by the fire-flies amidst the surrounding gloom.—*Tennant's Ceylon.*

PLANTING PEACH TREES.—A correspondent of the *Ohio Valley Farmer* says, peach trees should be set rather deep, because "the peach cannot, like the pear, apple or quince, put out new roots above the old ones."

THE MINERAL MANURE THEORY.



BARON LIEBIG somewhat astonished the agricultural world, several years since, by the enunciation of his theories in regard to mineral manures. By some, a few only, thinking and inquiring minds, these were received not merely with a cordial approbation, but with many expressions of delight. The Baron's name soon became familiar in all agricultural circles, and his theories were adopted by many as the wonderful elixir that, like the touch of Midas, was to turn all baser things into gold! They saw, prospectively, waving fields, golden sheaves, and bursting granaries, with lowing herds and bleating sheep upon a thousand hills, in the little snuff-box full of mineral matters that were to be sprinkled upon the land! And as discussions and illustrations, which they fancied were founded upon a substantial basis, increased the value of these minerals in their minds, the true foundation of all success in husbandry—the permanent manure heaps of the farm—depreciated in importance, and thus a vital blow was struck to the cause of sound progress and success. Had it not been for the influence of another element, more conservative and scrutinizing, an error of grave character might have been fallen into; one that would have arrested the progress of agriculture, rather than have advanced it.

This other class, distrustful and cautious, doubting every thing that bore an impress of the "profession" or the "shop," received these theories with many discounts, and they inquired every where, "What manner of doctrine is this, that this man teacheth?" They did not believe that *bulk* in manure was unimportant, though the *quality* were concentrated in the highest degree, and the idea was too preposterous for consideration, that potash, lime, and magnesia, with other matters valuable or indispensable to plants, were a part of the rocks which they so cordially hated. They had not inquired as to what materials soils are composed of, or how much of these minerals are constantly added to the soil by the abrasion or disintegration of the rocks, or how little difficulty there would be in determining the character of any soil, had we only to consider the constitution of the rock from which it was originally derived. They had not looked upon this theory in its incipient stages, seen it grow up step by step, as its projector had done, but looked upon it for the first time as full grown, and launched upon the world as a new and unattested doctrine.

Thus the zealots and the doubters contested every advanced point with each other, while more practical and discriminating men searched for, and found the Truth, between the extremes, and made it subserve the good cause. So the Baron's theories, modified by himself and others, have awakened a new interest and inquiry into the subject of *chemistry as connected with agriculture*, from which will certainly flow more ample rewards for labor upon the soil than have heretofore been gained. All men now regard chemistry in the cause of agriculture not only with complacency, but with entire confidence that it is an ally in the great work indispensable to the highest success.

If there was an error in Liebig's theory, it was in giving it a too sweeping character, whereby common persons got the idea that mineral manures would more than supply the deficiency of vegetable and animal combined, and that a profitable succession of crops could be obtained by the former alone. Whoever adopted this as a rule, soon found his error in the depreciated products of his fields. They must go together,—and without this combination, it is improbable that remunerating crops can for any length of time be harvested from the same soil.

In his recent "Letters on Modern Agriculture," Liebig touches the point upon which rests all our success in farming. With each crop, each plant, or portion of a plant, he says, taken away from a field, the soil loses a portion of the conditions of its fertility; that is, it loses the power of again producing this crop, plant, or portion of a plant, after the expiration of a number of years of cultivation. A thousand grains of corn require from the soil a thousand times as much phosphoric acid as one grain; and a thousand straws a thousand times as much silicic acid as one straw; if, therefore, there is a deficiency of a thousandth part of the phosphoric or silicic acid in the soil, then the thousandth grain and straw will not be formed. A single straw removed from a corn-field, makes this field bear one corn straw less. This must be so—and this single fact, ever present with the cultivator, should lead him to such practices as would always recuperate, rather than depreciate his soils; so that, at the end of a hundred years of cultivation, the soil is better able to produce a paying crop than it was the first year it was taken in hand.

Chemists inform us that *iron* floats in the blood that courses through our bodies, that *phosphoric acid* is a constituent of the brain and of the nerves, that *alkaline phosphates* and *alkaline earths* exist

in the flesh of all animals, and that a warm blooded animal without a large proportion of the *phosphate of lime* wrapt up in his skin, would be inconceivable to us.

We have been led to these remarks by running over Liebig's "*Letters on Modern Agriculture*," recently published, and will close them for the present with a single idea more from the Baron's luminous mind, showing the importance of mineral matters to animals as well as plants.

Were it possible, he says, for a plant to grow, flower, and bear seed without the co-operation of mineral matters, it would be utterly valueless to man and animals. A dog will die of hunger in the presence of a dish full of raw or boiled white and yolk of eggs, in which is wanting one of the substances most important for the formation of blood. The first trial teaches him that such food is as inefficient as a stone for the purposes of nutrition.

To those who find pleasure in this class of investigation, we earnestly commend the perusal of this book.

For the New England Farmer.

PRODUCT OF AN ACRE.

Your article in the paper of December 3d, headed "Three acres of land to support a small family," reminded me of some statements which I had laid aside for your paper, and which will show that a little land, well cultivated, may be made to go some ways in the support of a small family. The experiment was made by HIRAM DAMON, of this place, under rather unfavorable circumstances, as will be seen.

He cultivated, this last summer, about one acre of land, but in three several lots, some of it two miles from his house. From this one acre he raised the following vegetables, (the prices annexed are such as he obtained in the village here:)

Potatoes, 35 bushels	$16,00
Corn, 5 bushels	5,00
Peas, 5 bushels	10,00
Carrots, 10 bushels	5,00
Beets, 4 bushels	4,00
Turnips, 20 bushels	10,00
Onions, 1 bushel	1,00
Squashes, 50 in number	12,00
Pumpkins, 20 in number	2,00
Melons	5,00
Wheat, 7 bushels, (very nice,)	14,00
	$84,00

The above quantity he sold, besides using from this acre all the vegetables which he needed for a family of six persons.

Aside from the mere market value of his products, he has taken great pains to select and preserve his seeds, so that were there sufficient demand for these, he could realize, at medium prices, fifty dollars more.

He has twenty varieties of potatoes, raised by himself, this year, being the fourth from the ball. Some of these were planted the first of June, are remarkable for size, very mealy and finely flavored.

He has also a variety of squashes, raised hitherto only by himself, and which, in grain and flavor, surpass the famous Hubbard.

He has eighteen varieties of peas, and as many of turnips; his object in having such a variety, is to select the choicest seeds.

We had a severe and prolonged drought this summer, which injured our crops, and made our gardens less profitable than usual.

But I thought a little statement of his gardening, with many difficulties to contend against, might be of some of some value. A. E. P.

Springfield, Vt.

REMARKS.—Our friend, "A clergyman in ill health," with whom we strongly sympathize, will find encouragement in the details given above. In our recent remarks upon the note of the clergyman, there was a material point to which we did not allude—that of health. If he should enter upon his three acres, and labor judiciously, he would probably find himself a vigorous man again in three years, able to resume his profession, and wield the sword of the Spirit with renewed power and effect.

Let us see:—Mr. Damon sold $84,00 worth from *one* acre—that acre divided into three parts, and a portion of it *two miles* from his house! Then, at medium prices, he had

$50,00 worth of seeds	$50,00
For other products	84,00
	$134,00
	3
Clergyman's 3 acres	$402,00

The prospect really brightens; the clergyman's land is rich, and lies all together, so that taking the $402, with all the garden stuff added that the family would require, together with an occasional marriage fee, and the preaching of a sermon prompted by the texts in the garden, we think, after all, he could do very well. And how delightful the occupation, with an interesting wife interested in the employment, and cheering it with her presence, her suggestions, and perhaps her fingers among the flowers! We have always supposed there were other Edens than that on the ancient river, and shall anxiously await a call to see this new one, under the supervision of "A clergyman in ill health."

GRAPE-GROWING IN NORTHERN OHIO.—Much has been said of the vineyards in the vicinity of Cincinnati. By a letter published in the Cleveland *Farmer*, we learn that there are one hundred and eighty acres planted with grapes on a small island in Lake Erie, known as Cunningham's or Kelley's Island, some twelve miles north of Sandusky. The business has been growing up, gradually, since 1851. Eight vineyards were also commenced, this spring, on Put-in-Bay Island, and several on the Peninsula.

BRONZE TURKEYS.—The gentleman who gave an account recently of these turkeys, in the *Farmer*, resides in West Thompson, Conn.

For the New England Farmer.

A PLAIN QUESTION IN ARITHMETIC.

MR. EDITOR:—Suppose a farmer buys a cow on the first day of April, weighing 1000 pounds, and six years old, for fifty dollars. On the next day after the purchase she drops a calf, which takes all the milk she gives during this month, but one quart, per day, say twenty-five quarts, which is sold for two cents per quart. During this month she consumes two per cent. on her weight of English hay, which is worth fifteen dollars per ton, and two quarts of Indian meal per day, at one dollar per bushel. On the first day of May, her calf is sold for six dollars. During this month, May, she gives nine quarts of milk per day, which is sold for two cents per quart, and consumes hay and meal same as last month. On the first day of June, she is turned to pasture, which is worth eight cents per day, and increases her milk to ten quarts per day, which is sold same as last month.

On the next month, July, the same facts exist as last month, except she falls off in her milk one quart per day. August she falls off two quarts of milk per day from last month, July, and consumes twenty-five pounds of corn fodder daily at five dollars per ton, in addition to her pasturage. The next month, September, her corn fodder is increased to fifty pounds daily, and her milk is reduced to six quarts each day; her pasturage is also reduced half. During October she runs in fall feed, or mowing fields, has nothing else, and her milk is reduced to four quarts per day, which is sold for four cents per quart. The cost of feed this month, October, the same as pasturage, eight cents per day. In November she still runs in the field, but is put up nights and fed with ten pounds of good hay and two quarts fine feed, at eighty cents per bushel, each day. Her pasturage is reduced to four cents daily this month, November, milk selling for the same as last month and reduced to three quarts daily. From the first of December to the first of April, she is fed wholly at the barn, and consumes ten pounds of good hay, one peck roots, at twenty cents per bushel, and twenty pounds of meadow hay, or corn fodder, at five dollars per ton, daily. In this month, December she gives two quarts milk per day, and in January, one quart, and dries up entirely the first of February. All her milk from the first of October has been sold, for four cents per quart.

This, in my judgment, is a fair sample of milk raising in this vicinity. Now I should like to have your correspondents in different milk-raising districts reckon this up, and let us know whether the farmer has made or lost by the operation, and how much. Also, how this corresponds with the business in their locality. Evidently, there are some minor considerations which I have purposely left out of the account, in order to see how people reckon in this important branch of human industry. Although milk, to some extent, is one of the necessaries of life, yet, if it is sold below its cost, the evil that is done to the community is far greater than the good. At some future time I intend to answer this, (with your permission, Mr. Editor,) myself. In the meantime I should like to hear from some of your correspondents on the subject.

Perhaps I ought to state here that I have avoided in this calculation the fractions of a cent which often go into the prices of this article, but they will not vary the account much; at any rate, will not make it any more favorable to the raiser of milk in this section than I have given it. For instance, one farmer told me that he sold his milk through the first or spring and summer season for two and an eighth cents per quart, and had contracted this fall and winter, at three and a fourth cents. However, I prefer to have the calculation made as I have reckoned it; holding that it is not very material whether we make a very large or a smaller loss in the business, as it in the end has about the same effect, whether we dwindle along a whole lifetime to waste our effects or find the bottom of the hill at an earlier period.

Many people seem to apprehend, that it is of but a little consequence whether they make a loss in the sale of their products or not, inasmuch as they can go ahead and appear to be doing something; as one man remarked, "somebody will get the benefit of it." But let me say to my friend, and all who take this view of the matter, that you forget about those poor neighbors and their families who have been less fortunate than you, and who depend on their own efforts for a livelihood, but cannot go into this branch of human industry, except at a loss, on account of the ruinous competition, which only can be prosecuted by those who have an income equal to this drain upon their resources.

T. J. PINKHAM.

Chelmsford, Mass., Nov., 1859.

REMARKS.—Our correspondent is determined to probe this business of farming, as a business on which loss and gain is concerned, to the quick. He is doing the farmers a good service, and is welcome to our columns.

For the New England Farmer.

MR. BARBER'S POTATOES.

MR. BROWN:—Your correspondent, Mr. Barber, of Warwick, wishes some explanation why his "potato vines" suddenly "turned black, in a a day or two after the thunder shower the 31st of August?" There was a pre-disposing cause, upon which the rain and sudden change of atmosphere acted. Mr. Barber did not find corn, tomatoes, beans and other vegetables and crops "turning black" in "a day or two" after the "cold" rain. Why not? Because there were not at the roots of these various crops, enemies in myriad numbers, subsisting on the sap, the same as are found on the roots and lower joints of the potato plant. If Mr. Barber had made a thorough and careful microscopic examination of his seed potatoes before or after planted, he would have found perforations, small warts and slimy looking brown spots on the surface, on which are hibernated eggs of insects. After the potatoes are planted the same genial temperature which warms the earth and sprouts the potato, soon starts to life, from their nidus, myriads of minute larva insects. For many weeks, these enemies suck or pump out the sap, thus enfeebling the plant. It is a consumption, acting upon, and spreading from the very vital part to the stalks and to the tubers. This derangement and poison may be compared to consumption acting upon the vital part of the human system. The

sudden changes of weather caused by thunder and cold rains, simultaneously produced action, from heat to cold and subsequently cold to heat following, and produced the same sudden change and death-like appearance in the pre-disposed enfeebled plants, that over-exertion, sudden changes of weather and unusual exposure produced upon the consumptive patient. He drops away, dies suddenly, being the effect, mainly, of the pre-disposed cause. And is not the change so simultaneously noticed in the potato plant analogous? Every effect results from a definite cause, and I have explained to Mr. Barber what he will more fully understand when he makes a careful research with the microscope into the botanical condition and entomological connection which are developed and clearly revealed in the potato plant, from the attentive study of these three sciences combined. The former lays before us in clear vision the wonders of the two latter.

Dec. 6, 1859. THE FARMER BOY.

DOSING ANIMALS.

The practice of daily or weekly dosing and drugging domestic animals is pregnant with good or evil results. Hence, it is an important subject —one that should interest every one who keeps only a cow or a pig. So, too, is proper treatment, in health and in sickness, important.

Every one who is at all conversant with the current literature of the day, often—very often—sees, "going the rounds," such recipes as this: "Salt every day, and salt, ashes and sulphur once or twice a week; salt, ashes, and hen manure once or twice a week," &c., &c., varied somewhat in their proportions, and all for the benefit of animals that are already in the enjoyment of good health, and have been for a long or short time, and are likely to continue so, for aught that is known. Now, in short, I am opposed to all such routine courses. This feeding salt, ashes, sulphur or charcoal to animals as much as they can be induced to eat of them, or giving condition powders, corrosive sublimate, or any of the et ceteras daily, weekly or monthly, is, I believe, almost always sooner or later injurious, in each and in every instance, where the patient or patients are in a good healthy condition. As an illustration, I will give one out of many, that might be adduced if it were at all necessary.

A friend—a physician—in commencing business, bought a fine roadster, and naturally—and rightly, too—wishing to keep him sound, and looking sleek as he then did, was led to read some upon the proper care and treatment of the horse. Reading, I think he told me, in "Youatt on the Horse," the beautiful effects of corrosive sublimate, he commenced giving it, as directed, to him, and there was a gloss that "was a gloss" easily to be seen on that doomed horse, for a while. But stop, or rather watch him for a while!

Before a year he coughed. The corrosive sublimate was changed for cough medicine, condition powders, carrots, apples, potatoes, &c., but with his favorite drug in the interim; yet still he would cough just when he wished to, and that was quite often, while that hitherto beautiful coat began to fade, and look sickly.

About this time, he rode with me a few miles with my little nag. He wished to know what I gave her to keep her in such sound health, and fine condition. I told him that she had no medicine of any kind, and never had, except once when she had a severe attack of the "horseail," before one year old, and even this she almost entirely refused. He continued to change his tactics, and dose, dose away for some six months longer, with but little improvement, and then went into another county, and exchanged him for a fresh one. But whether he has learned, in this his first voyage, to let well enough alone, I know not, because he is now in Aroostook county.

Finally, I have seen somewhere, with pleasure, that Dr. G. H. Dadd, has raised a warning voice against this continual dosing, which is extolled to be so necessary and valuable by some. Why should we give man or beast a poisonous drug when in health, to keep him in health? Does not the undue action of the system to rid itself of this deadly foe, at once produce a deteriorated or lowered condition of the original healthy system? Is there not, then, an injury inflicted that we are not able accurately to estimate, or repair entirely, notwithstanding it is often said, when a sick man has seemingly recovered, "he is good as new," and so of the horse or ox?—O. W. TRUE, *in American Stock Journal.*

LIVE BRAVELY.

The world is half darkened with croakers
Whose burdens are weighing them down;
They croak of their stars and ill-usage,
And grope in the ditch for a crown.
Why talk to the wind of thy fortune,
Or clutch at distinction and gold?
If thou canst not reach high on the ladder,
Thou canst steady its base by thy hold.

For the flower thou hidst in the corner
Will as faultlessly finish its bloom,
Will reach for a sparkle of sunshine,
That clouds have not chanced to consume.
And wouldst thou be less than a flower—
With thought, and a brain, and a hand?
Wilt wait for the dribbles of fortune,
When there's something that these may command?

There is food to be won from the furrow,
And forests that wait to be hewn,
There is marble untouched by the chisel!
Days that break not on the forehead of June.
Will you let the plow rust in the furrow—
Unbuilded a house or a hall?
Nor bid the stones wake from their silence,
And fret as if fretting were all?

Go, learn of the blossoms and ant-hill;
There's something thy labor must give,
Like the beacon that pierces the tempest,
Strike the clod from thy footing, and live.
Live—not trail with thy face in the dross heap,
In the track of the brainless and proud,
Lift the cerements away from thy manhood,
Thou art robbing the dead of a shroud.

There are words and pens to be wielded,
There are thoughts that must die if unsaid;
Wouldst thou saunter and pine amid roses,
Or sepulchre dreams that are dead?
No, drag the hope to the pyre,
Dreams dead from the ashes will rise;
Look not down on earth for its shadow,
There is sunlight for thee in the skies.

THE TREES OF NORTH AMERICA.

The officers of the Smithsonian Institute, some time ago, engaged the services of Dr. J. G. Cooper, to prepare an essay upon the Sylva of the North American Continent. The result of his labors has been published in pamphlet form by the Institute, and the following facts are taken from the document:

There are no less than one hundred and thirty-four different species of trees on the continent of North America, including a vast variety from the rich tropical sylvan products of the Mexican districts, to the stunted pines that pass their unseen sturdy lives among the snows of Labrador. The tallest trees are found in California, where is the giant redwood—*Sequoia gigantea* of Torrey, or the *Wellingtonia gigantea* of Hooker—which attains the prodigious height of four hundred and fifty feet from the ground, about half as high again as Trinity church steeple. The yellow fir, or *Abies grandis*, which grows in Oregon, is also a very respectable tree, often reaching the height of two hundred and fifty feet. In Massachusetts they have the whitewood poplar, of one hundred and forty feet in height, and the same State also possesses a *Zanthoxylum Americanum*, which is more familiarly known as the tooth-ache tree. In New Jersey there may be found a species of white beech one hundred and twenty feet high. After these it is quite a contrast to descend to a prickly pear tree of Mexico, which, though rejoicing in the gorgeous title of *Opuntia Athanthocarpa*, is but six feet high. The *Prunus Subcordia*, a kind of plum tree, is another sylvan dwarf, and the *Juniperus Pachypoloea* is also an arboreous pigmy, neither of those Mexican trees being over ten feet in height.

The Gulf of Mexico has an important effect upon the forest growth in the United States. It is from the gulf that many rain storms proceed, and they are blown easterly by westerly winds, until they fall generally before reaching the Ohio. Thus, as they do not reach the Illinois region, that district is deprived of its fair share of rain. Without moisture, there can be no trees, and that is the reason that Illinois and Michigan abound in treeless prairies that are not to be found in places where the rain storms from the gulf fall. In Texas, where these gulf storms do not travel, the moisture and consequent vegetation and sylva grow less and less as we proceed westward, until we come into the great deserts that exist in the Dacotah regions.

For the New England Farmer.

COMMON SENSE.

I have often heard the observation that common sense is the best of all sense. I was reminded of this on reading the remarks of your Hollis correspondent, "On the profits of farming." Like views have often occurred to me, on looking about among the farmers whom I have known for the last fifty years. Generally speaking, those who have been industrious, limiting their attentions to their own business, letting alone all manner of speculation, have succeeded well in the world. The great secret of success is, to have something as useful to be done, at all times, in winter, as well in the other seasons of the year. Never hire others to do what can be well enough done by yourself.

Every farmer needs a workshop, well supplied with tools. All his boys should be instructed in the use of them. He should know how to mend his own carts, plows and carriages, and do this at times when he cannot advantageously work in the field. He should have "a place for everything, and everything in its place." This motto, I remember to have seen conspicuously posted about the buildings of one of the best conducted farms I ever saw. This was well, thus to remind all of their rule of action, if it could not otherwise be impressed on their memory; it would seem better to make it a part of their nature.

"As to pulling weeds, you had better let them alone, in a dry time;" I do not accord entirely with this rule laid down by friend Emerson. I would sooner say, let there be no weeds to be pulled; or, if there be any, let them be removed at earliest opportunity, in the most careful manner. Weeds, like vices, even the very common vice of smoking tobacco, pollute all around. They can not be too soon eradicated. P.

December 3, 1859.

EXTRACTS AND REPLIES.

BUTTER IN WINTER.

I would like to inquire through the *Farmer* the mode of making butter in cold weather. I have not made butter since the middle of last month—the last that I churned I kept the dasher going 14 hours, and had to give it up. In warm weather it comes in from 5 to 15 minutes. I have put the churn in hot and cold water, alternately, and have tried it in a warm room and cold room, but all to no purpose. The cream, after churning so long, is so rancid that it cannot be used for any purpose whatever. My cows are fed on the best of hay, have potatoes once a day, and occasionally a few ears of corn. If you or any of your correspondents can inform me how to make the butter come, you will confer a favor not only on me, but on many of my neighbors. E. LEONARD.

New Bedford, 11 *mo.*, 27*th*, 1859.

REMARKS.—Butter was made in our family through the whole of last winter from the milk which five or six cows gave. The milk and cream stood in a cellar where the temperature was *uniformly* at about 62°; and when the cream was removed in order to churn it, it was kept at as near 62° as possible. Ten to fifteen minutes would bring the butter, which sold in market for thirty cents a pound. Cream should not be kept more than three days, we think, and it seems to us that its temperature should be nearly uniform all the time it is being gathered. We hope those who are successful will help brother Leonard out of his difficulty.

THE LAWTON BLACKBERRY.

Your subscriber from New Bedford is no doubt correct in his belief that the Lawton Blackberry can be successfully cultivated in Massachusetts. I have this last season, within three miles of your place in Concord, from three-fourths of an acre,

gathered eighty bushels; my crop would have amounted to fully two hundred bushels, had not one acre of plants been winter-killed; they are more liable to be killed by a very severe winter, like the last two, than the native vine.

In any part of Massachusetts where the native blackberry flourishes, upon land that will grow seventy-five bushels of corn to the acre, one hundred bushels of Lawtons will be no more than an average crop. With some experience in the cultivation and sale of the berries, were I to set two acres, one would be Lawton and the other Dorchester. Among the vines which I set three years ago, were one hundred Newman's Thornless, and, so far as I have proved them, they are utterly worthless.

The Dorchester, unless the Lawton is fully ripened, is much the best berry, but for a table berry and for cooking purposes, when fully matured, the Lawton has no superior. S. H. I.

Lincoln, Mass., Nov., 1859.

REMARKS.—We are glad to learn that the Lawton succeeds so near us, and should be glad to know whether any of S. H. I.'s ripened so that those who only eat sweet fruit would have relished them? We have not, nor have our neighbors, been able to accomplish this.

—

LAND PLANTED WITH POTATOES THAT HAD BEEN PASTURED WITH HOGS.

Have any of your readers planted land with potatoes which had been pastured with hogs the previous season? What was the result? I have about two acres upon which a large number of hogs have run this summer, and I should like to know what crop I can raise next year to the best advantage (corn excepted, it being too much shaded by trees for that crop.) Any reply to the above will be very thankfully received by a

Worcester, Nov., 1859. YOUNG FARMER.

—

TOOLS FOR DRAINING—TURNIPS AND POTATOES FOR CATTLE, MIXED WITH WHEAT AND CUT STRAW.

I have been draining this fall, and have concluded there should be some easier way to make a ditch, than with a shovel and spade, and my object now is, to inquire if there is an implement in use that will, with horse or steam power, make and clean a ditch, two and a half feet deep, by once passing over the ground?

A few winters ago, I fed four oxen and four cows on wheat and oat straw, from December to April; at the same time I gave the oxen one bushel of English turnips, divided among the four, and one bushel of potatoes to the four cows. They all went through the winter as well as I ever had any on good hay. The oxen went through on the turnips as well as the cows did on the potatoes, and I consider the turnips and potatoes as good as can be provided for winter feed—say one bushel to eight young cattle each day.

HORACE HOLLISTON.

North Montpelier, Vt., 1859.

REMARKS.—Prof. Mapes, Editor of the *Working Farmer*, N. Y., invented and constructed a ditching machine several years since, and Mr. J. Thomas, one of the editors of the *Country Gentleman*, also devised and constructed one, but we have not seen either of them in operation. We learn that there is a new machine about to be introduced for this purpose which will be cheap and effective, and that a machine for making pipe for draining purposes, will soon be forthcoming. The pipe-making machine, we understand, will be so compact and portable as to be easily removed from farm to farm where clay is found, while at the same time the price will be so moderate as to make it an object for a person having ten to twenty acres to drain to purchase one.

—

CANADA PEAS—PIN WORMS.

MESSRS. EDITORS:—Will you allow me to inquire through the *Farmer* the value of Canada peas, as compared with corn, for feed for cattle, horses and swine? Would they do well ground and fed with cut hay or straw? I wish to say, for the benefit of all interested, that India wheat is the best remedy for pin worms in horses that I have ever tried. ADIN BUGBEE.

Snow's Store, Vt., Nov. 25, 1859.

For the New England Farmer.

TRANSACTIONS OF THE MIDDLESEX AGRICULTURAL SOCIETY

FOR THE YEAR 1859.

By the kindness of an unknown hand, am I favored with this neatly printed pamphlet of 40 pages. It is indeed "*multum in parvo.*" What is wanting in extended detail of culture, such as is found in many other society publications, is made up by condensed general views of culture, and keenness of wit. I rejoice to find a voice from the pulpit in aid of the farmer. I have long been of the opinion, that if our clergymen would appropriate one-half the time now wasted on antique theology, in familiarizing themselves with the culture of the garden and the field, and teaching their supporters how this can be most advantageously done, they would do a good service in their day and generation.

I was particularly pleased with the remarks on education in our schools, contained in this pamphlet. I hope the intelligent President of this Society will endeavor to have this preaching developed in practice. I know of no one who can do more or better than he, if he should undertake it.

December, 1859. ESSEX.

SEA WEED FOR WADDING.—The Paris papers speak of a new industry that has arisen in France from the exigencies of the times, and one which is destined to supply one of the necessities of that rage for destruction which is becoming so apparent. Government has ordered the systematic gathering of the sea weed which is washed on the rocks of the coasts of Normandy and Brittany to serve as wadding for artillery—it being found to answer the purpose admirably—keeping the iron cool, and not liable to ignition—like the cotton wad hitherto in use.

For the New England Farmer.

RURAL SCENES, OCCUPATIONS AND PLEASURES.

MR. EDITOR:—I am well aware, that I cannot do justice to this interesting subject in the brief space allowed in the crowded columns of a newspaper; yet, without taking up too much of your valuable room, I would like to offer a few remarks upon this subject for the consideration of those who are anxious to leave their paternal homes in the country for a residence in the city.

It is freely admitted, at the outset, that city life has some advantages which country life has not. These need not be particularly pointed out, as they will readily occur to every one. Yet, after all, city life runs quick, is giddy, intoxicated, high-minded, and under continual excitement. Much is condensed into little time and space. Men live, as it were, under a high-pressure system. The candle of life is kept in a continual blaze; and it frequently goes out at a very early period.

But country life, on the other hand, has its own peculiar advantages, and its scenes, its occupations, and its pleasures, are favorable to health and reflection, to long life and true enjoyment. It is no part of my present object to set up city and country as rivals; they are both, perhaps, necessary to make human existence pleasurable. This is almost self-evident. Whence come the motives to change from city to country, and from country to city, among those whose circumstances or occupations do not bind them to one locality? Yet, I would ask all those who are so anxious to leave the paternal roof in the country for some garret-loft in the city, to tell me, how they account for that rush of cooped-up men and women—mechanics, artisans and merchants—to the green fields of the country, to the mountains, hills and valleys, and wild woodland scenes, which invariably takes place when a holiday is proclaimed? It is instinct fleeing to the balmy breath and soothing influences of country scenes, to revive the powers that have been impaired, and heal the bruises that have been inflicted by the artificial mode of city life.

The scenes, occupations and pleasures of rural life are too well known to need a particular description. It is sufficient to say, they are the scenes of every day life, and of every day pleasures; such as fill the mind with joy and gladness, and lift the soul to God. They are the scenes, occupations and pleasures which all parts of the country present, and from which thousands of our city friends yearly drink in delicious, untainted pleasure. For they leave the scenes of their business and of profit behind them, to ramble where the breezes blow, and amid the bracing mountain air, where many an invalid has picked up health, and received, as it were, a new lease of life. But, as they do not engage in the occupations of country life, they cannot enjoy all its pleasures. There is a real pleasure in rural occupations and pursuits, which city life, with its competitions, anxieties and continual excitements, cannot yield. There is a real satisfaction of mind in beholding the fruits and productions of one's own industry and labor, and in witnessing the blessings and bounties of Divine Providence. The scenes, occupations and pleasures of rural life, are all alike healthful to the body, and invigorating to the mind, and conducive to human happiness.

The country may be said to be one great book, which is open to the eye of every one who can read and understand it. It has a language of its own, peculiar to itself. There are passages in it of exquisite beauty and unparalleled grandeur. We read its beautiful passages when we gaze upon the fair landscape, reposing under the sunny sky of a summer day; when we listen to the sighing breeze among the leaves of the forest; when we hear the warbling of the songsters of the grove, making the air vocal with their music; when we listen to the gentle murmurings of the running stream, as its limpid waves ripple over their pebbled banks, the sweetest of all nature's music. The scanning of such passages imparts a pleasure to every thoughtful mind. And yet many, very many, in their hot haste to become rich, and anxiety to cut a figure in the world, are willing to relinquish all these pleasant and quiet and healthful scenes and employments for the busy mart of trade and traffic; to be covered all over with the dust, and to be surrounded by the hubbub, the perplexities and the temptations of city life! And all this for the sake of acquiring riches and honorable distinction in the world, which nineteen-twentieths fail of obtaining.

JOHN GOLDSBURY.

Warwick, Mass., 1859.

CONDENSED MILK.

The Hartford, Ct., *Homestead*, gives a detailed description of a "milk-factory," which a Mr. Borden, has put in operrtion "in one of the wildest gorges of the Litchfield hills."

"The long and short of the whole process is, that fresh milk is received night and morning, and condensed to one-fourth its original bulk by evaporation, and in this shape, that is, looking like very thick cream, it is sent to market, requiring only to be diluted with as much water as has been removed from it, to be as perfect and excellent milk as it was at first, and in fact, a little better, as we will explain: The cost in market is 25 cents per quart, or 6¼ cents for a half pint, which by the addition of three half pints of water will make a quart of milk decidedly better, more healthy, and less watered than the milk bought of milkmen in our cities; and capable, after being diluted properly, of answering all the purposes of the best milk. The cream will rise as usual, and butter may be made, and the milk will show itself possessed of all the properties of fresh milk."

The writer regards it as a most valuable discovery,—a saving of three-fourths of the expense of transportation is made, and the milk thus prepared remains sweet so long that it may be sent from Connecticut to New York or Boston, and arrive in a condition to keep longer than milk fresh from the cow.

TOO MUCH GRAIN.—Such is the heading of an article in the *California Farmer*, in which the editor, after admitting that they "have an abundant harvest the present year—twice, and thrice, perhaps, the wants of the State," says it is unmanly for the farmers to murmur, as they do, be-

cause of too much food. Grain-growers are advised to ship their supplies abroad, and at such prices as they can get. The same paper describes the "First Woolen Factory in California," just completed in San Francisco. The factory is one hundred and twenty-five feet long, fifty feet wide, and two stories high, and "in all its arrangements for working-power is equal in excellence to any factory in the Atlantic States." The machinery, and the operatives of such establishments will make a better market for the farmers' surplus than can be furnished by the exporting merchant.

USEFUL OBSERVATIONS.

He that has eyes to see, may perceive an immense amount of useful knowledge scattered all along his pathway through life, and if notes or memoranda were made of such observations, and sent to such papers as the *Artisan*, thousands would be grateful for the instruction.

As an example, see how few machinists know the proper method of adjusting leather belting. The common method is to place the flesh side of the leather upon the pulleys; for what reason we know not, unless it is supposed to look neater, or to increase its traction.

But in either case a great mistake is the result, and leather belting should never be so worked.

Always place the flesh side of the belt outward, because it is the strongest, and should not be worn away upon the pulleys. It is estimated, by those who have tried the experiment, that the belting thus run will last twice as long, and perform quite as efficiently.

Another example we might give, which thousands of workmen, who use the necessary article of glue, may think valuable. All that is necessary to keep glue sweet and free from that offensive smell which good glue will acquire when left to stand, from time to time, in the pot, is to use a stirrer of zinc in place of wood, or to keep a small piece of zinc in the bottom of the pot, or, when steam is used for heating it, to make the pot of zinc.

Millions of such items can be given by men of observation, and we shall take great pleasure in re-writing them, giving the punctuation, etc., as well as publishing them, if we are furnished with the facts.

Books and papers are sometimes very instructive, but few of these give this kind of information, and this is what artisans most desire.—*Cincinnati Artisan.*

A COW SUCKLING LAMBS.—A cow belonging to Mr. Thomas Hislop, of West Oxford, calved last spring. Her calf was taken from her at five weeks old. A fortnight afterwards an ewe died, leaving three lambs. As there was danger of the lambs also dying, the owner took one of them, and held it to the cow's teats. Next morning on going to milk the cows, all three lambs were found sucking the cow. Another lamb was placed with the cow, and she has suckled all four ever since. They follow her wherever she goes, and she protects them from dogs and other animals that attempt to molest them, showing the same affection for them as if they were her own progeny.

PEAT, MUCK, AND COMMERCIAL MANURES.

We have before us a copy of the reports made to the Connecticut State Agricultural Society, in 1857-8, by Prof. SAMUEL W. JOHNSON, Chemist to the Society, and Professor of Analytical and Agricultural Chemistry in Yale College. We have been greatly interested in these excellent reports. The analyses of various fertilizers, made by a person of eminent ability for the task, and who undoubtedly stands beyond the influences sometimes thrown over the analytical chemist, must be of considerable importance to our progressive farmers. The Essays on Manures are critical and exact, noticing nearly all the forms in which manures are used in this country. That which treats of *Peat* and *Muck* is of special value, as our people do not yet properly appreciate muck as a manure, and so long as this material is so abundant and accessible, it is important that its true value should be every where known. Below are some of the heads discussed in the Essay: What is Peat? The condition under which Peat is formed. The different kinds of Peat. The chemical composition of Peat.

After these Prof. Johnson notices the characacters that adapt peat to agricultural purposes—

1. Its remarkable power of absorbing and retaining water, both as a liquid and as vapor:
2. Its power of absorbing ammonia:
3. Its action in modifying the decay of organic (that is *animal* and *vegetable*) bodies:
4. Its effect in promoting the disintegration and solution of mineral matters, (that is, the *stony* matters of the soil:) and
5. Its influence on the temperature of the soil.

When these points are well understood, most farmers will have the means at command of greatly increasing the productive power of their soils. Prof. Johnson has our sincere thanks for this new acquisition to our knowledge in regard to manures.

AGRICULTURE IN TUSCANY.—The correspondent of the *Newark Advertiser* gives the following account of the mode of gathering the harvest in Central Italy:

To-day—in this nineteenth century!—one sees here sunbaked women and girls, cutting, or hacking, rather, the grain with ill-shaped, twelve-inch sickles, and beating it out, sheaf by sheaf, on a stone, with the hand, aided only by a rough stick. Threshing instruments are almost unknown in Tuscany: and then, what a winnowing, without machines, follows the reaping! It is done in this wise: The grain heaped up on the ground in one place, is thrown by shovelfuls through the air to another place, the wind being winnower, and supposed to blow away the chaff as it passes. One watches this behind-the-times operation with his teeth on edge with the sense of gritty bread, and the prospect of eating his "peck of dirt" in Italy before him.

A PAIR OF CRESTED DUCKS.

Mr. BEMENT, of Albany, author of the American Poulterer's Companion, says these ducks are a beautiful and ornamental variety. They are of all colors, having in fact no other common features. He has had them pure white, black, and mixed, black and white, with large turbans or top-knots. The white are considered the most beautiful, as they have yellow legs and bills.

In speaking of this duck, Mr. Latham says—"This inhabitant of the extremity of America is of the size of the wild duck, but is much longer, for it measures twenty-five inches in length; a tuft adorns its head; a straw yellow, mixed with neatly colored spots, is spread over the throat and front of the neck; the wing blue beneath, edged with white; the bill, wing, and tail are black; irides red, and all the rest of the body ashy gray."

CRANBERRY CULTURE.—Obed Brooks, Esq., of Harwich, has carefully compiled a statement of the cranberry crop of the towns of Harwich, Brewster and Dennis, for 1859. An aggregate value of $23,622 is no small income to the families owning these cranberry meadows. We can give no estimate of Barnstable. A large number of persons severally own small lots; but the aggregate must be a number of thousands of dollars worth. Mr. Solomon Hinckley, residing in our immediate vicinity, sold to the amount of $740; and Dr. Jenkins, of West Barnstable, $600. The cranberry culture is now attracting much attention in most of the Cape towns, and very numerous lots of ground are being prepared for the vines.—*Barnstable Patriot.*

COMMONWEALTH OF MASSACHUSETTS.

AGRICULTURAL DEPARTMENT.

State House, Boston, Dec. 7, 1859.

DEAR SIR:—The Legislature, by the Act of 1859, chap. 203, proposed to offer some encouragement for the establishment of Farmers' Clubs in the various towns of this Commonwealth, and, to some extent, to aid those already established. The Committee of the Board appointed to make provision for carrying the aforesaid Act into effect have instructed me to say that if there is any desire among the farmers of your town to establish such a club, and to have the aid of any suggestions that might be offered by an agent employed by the State Board of Agriculture, it would be proper for them to hold a preliminary meeting and decide upon some definite time and place when and where they would like to have such an agent; will you please inform me of it at an early day, stating the time fixed upon, which should be sufficiently long after the date of your letter to give time for the necessary preliminary arrangements.

In cases where a Farmers' Club is already established, and is in operation at the present time, and desires to avail itself of the aid offered by the State, a copy of the constitution or form of organ

ization, the number of members, the general course pursued, whether it be by discussions, lectures, town shows, or otherwise, the nature of the assistance which would be most acceptable to the members of the club, and all other necessary information, should be forwarded to me, when, if it is practicable, the club may be furnished with copies of the Reports of the Board, and with one or more agents to take part in the discussions or lecture, according to circumstances.

Please state explicitly, therefore, if it is proposed to ask any aid, what is wanted and on what special subject it is desirable the agent should speak, the time when the meetings will be held, &c.

Any club which may be formed, or any club now in existence which may wish to avail itself of the provisions of the above named Act, will be expected to conform to said Act by making the required returns at the time specified, and to aid the Board in collecting facts and statistics relating to agriculture if it should hereafter be desired.

Very truly, your obedient servant,

CHARLES L. FLINT,

Sec. of the State Board of Agriculture.

SHEEP HUSBANDRY.

At the weekly meeting of the *Concord Farmers' Club*, Dec. 1, 1859, an interesting discussion occurred on *Sheep Husbandry*. But few of the members of the club have had experience in this department of farming. The subject, however, is arresting the attention of farmers in the eastern parts of the State. It is believed that sheep may be profitably raised for their mutton, and that in connection with this they may be made the means of renovating our exhausted and bush-covered pastures. We are glad to learn that the Trustees of the Middlesex Agricultural Society have offered a premium of fifteen dollars for the best flock of not less than twenty sheep, that shall have been owned in the county six months. We hope the enterprising farmers in that county will test the profit of raising sheep, whether for wool or mutton, and the offset of keeping them upon their pastures. Through the kindness of Dr. JOSEPH REYNOLDS, the able Secretary and Reporter of the club, we nave obtained from the records some of the remarks which we give below. The first four persons who speak are appointed as leaders at a previous meeting, so that delay never occurs in opening the discussions.

Mr. SIMON BROWN remarked that he was familiar with the care of sheep in his youth. He had been obliged to sit up night after night, in cold weather, to take care of lambs, because they were dropped too early. The first broadcloth he ever wore, was made from the wool of sheep which he had assisted to raise. Sheep raising was formerly profitable, but it had been discontinued among us, chiefly on account of the losses occasioned by dogs. He had been informed that in the adjoining county of Essex, there were only 500 sheep, but there were 3,500 dogs! A good many persons are now entering upon the business. A new spirit has been awakened upon the subject. Sheep have been improved in size and productiveness, as much as, and perhaps more than, cattle. Fifty years ago, a quarter of mutton in England, that weighed 15 or 20 pounds, was thought large. Now a quarter of mutton is frequently seen weighing 50 or 60 pounds. One weighing 60 pounds was recently exhibited in Boston market. If there is a demand for mutton, sheep raising must be profitable. He had no doubt that there would be a demand for all the good mutton that might be raised. He spoke of the effect of keeping sheep in reclaiming pastures. He knew a tract of land in Plymouth County, that was formerly so covered with briars and rose bushes, that it was almost impossible to walk through it. He saw it last fall, and it was a beautiful green pasture, with a smooth surface, and not a bush or briar upon it. It had been reclaimed *by the use of sheep alone.* If he were going to keep sheep, he should select good, healthy, well-favored animals, and would never confine them to one place, in doors or out. They should be allowed to run in and out of the barn at will, all winter. In clear, cold weather, when the thermometer was below zero, they would lie on the litter in the yard. When it was damp, even if warm, they would lie in the barn. They should be allowed to follow their instincts in this respect. His father's barn had racks all around the walls on the inside. The hay, mostly clover, was let down from above, and troughs were furnished under the racks for roots and beans, and to catch the clover heads if any fell through the racks. Diseased sheep must be immediately removed from the flock.

Mr. E. WOOD, Jr., remarked that he had no experience upon the subject, but he thought it as desirable to keep a variety of stock, as to raise a variety of crops. The profit would depend upon circumstances. Sheep might be profitable on lands that were easily fenced, and not upon other lands. He has a large pasture, much grown over, where he has been mowing and burning the bushes. He has mowed over 50 acres the past year. This pasture is fenced on two sides with heavy stone walls. These walls he proposes to top either with poles or vines, and to put on sheep the next season. He thinks, from what he has seen, that he can keep 50 sheep, and after two years, as many cows as he now does, with the sheep, and expects to find sheep that may be kept by common fences. He has seen a flock of one hundred, that yield five pounds of wool to a sheep, that do not get over a three foot rail. They are destroying the bushes and weeds, and bringing in the white clover. This is the effect we most need.

Mr. JAMES B. ELLIOT, from Keene, N. H., was present, and favored the club with some interest-

ing remarks. He is engaged in sheep husbandry, and has been for five years. His sheep had become breachy. When this is the case, the best way is to change the entire flock. He had recently been looking among the sheep in Vermont, and had purchased a hundred, at the average price of five dollars. He expects they will yield from five to six pounds of wool each. He has been to Albany, and seen the long-wooled sheep. They do best, as he is informed, in small flocks. He wishes to keep a pretty large flock; has one pasture that will carry 300, and another that will carry from 150 to 200. Sheep require about one acre each. If the land is very rocky, they require more. Large sheep require more. He has concluded to keep fine wooled sheep. Many of the farmers on the Connecticut are now feeding all the corn they can raise to their sheep. They buy wethers, and put them up about the 1st of December, and give them cob meal, and oats, all they will eat. In March they shear them, and send to market in the cars, alive. They will weigh from 150 to 170 pounds, live weight, and bring from five and a half to seven cents per pound. In Walpole, N. H., they are feeding 4,000 this winter. The farmer may fat two sets in the fall and winter. Mr. Johnson, of New York, fats all the year round. The manure from sheep is better than that from cows. From 21 sheep, he made 10 loads of the best manure he ever saw. Leaves, or some proper absorbent, should be placed on the bottom of the yard, and litter used as required. This manure is excellent to mix with muck. It costs about forty cents, in New Hampshire, to pasture a sheep from the 10th of April till the 20th of November, or till they are "snowed up," and about $1,10 in the winter. A sheep requires about two pounds of hay, daily. He feeds with hay twice a day, and once with roots. Sheep require a plenty of fresh air, and running water. Some keep them without water, but it is not so well. Sheep will destroy almost every kind of bushes, except pines and alders, Some sheep are easily kept within ordinary fences. Others will learn to jump over almost every fence. He related an anecdote of one man who had kept a flock of sheep 29 years, and never knew but one get out of the pasture. Mr. E. thought small mutton quite as good as large, but that, as most farmers in this section would keep only small flocks, the long wooled sheep might be the most profitable here. The Cotswold and South Downs would yield from five to six pounds of wool. This wool, although it does not fetch quite as much as fine wool, is in demand for certain kinds of manufacture. He said that a man of his acquaintance in Vermont realizes $1000 per year from 200 sheep.

We think these statements from an intelligent, practical man, who is himself engaged in the business, will not be without interest to many of our readers. Several other gentlemen of the club spoke upon the subject, and were listened to with interest.

For the New England Farmer.

SEASON AND CROPS IN IOWA.

Our western autumn is departing as quietly as a lamb. Early in November, we had a severe attack of winter of two or three days' continuance; with this exception, it has been mild and dry throughout.

The sharp frost, September 1, together with the severe drought preceding and following, reduced the corn crop nearly one-half from what it promised early in the season. The cob is of the usual size; but the kernel is shrunk so much that it requires two full bushels of ears to make one of corn. One and a half of ears to one of corn, is, I believe, the usual proportion.

The wheat also failed to realize the expectation of farmers, in amount, by about one-third; though of very good quality.

Potatoes are very small, and not very numerous, but entirely free from rot, and of very good quality, even the smallest.

Buckwheat was completely ruined by the frost, and the sorghum greatly damaged, both in quantity and quality. There was a large amount of the latter planted; but it does not prove a very profitable crop, as yet.

While our friends at the East are rejoicing in the full tide of prosperity, we are still obliged to wait for the "good time" to come. Many of our farmers, who were badly in debt, are not only unable to extricate themselves, but scarcely able to pay their interest, from the in-gatherings of the year.

Nevertheless, we kept Thanksgiving with you, and the other twenty-five States, on the 24th inst. And very much do we find to be thankful for, although still depressed with debt and short crops. We still continue to have excellent health. Disease, what little there is, assumes a very mild form, more so, I think, than in Massachusetts. The scarlet fever, which has lingered around us for months, is so mild and tractable as to be managed in most cases without medicine. Very few have died of it; none, I believe, who trusted to water applications and good care. M. R. C.

Tipton, Iowa, Nov. 30, 1859.

Points of Cows.—Mr. A. L. Fish, a dairyman of Herkimer County, N. Y., gives in the Little Falls *Dairyman's Record*, some observations on this subject. He says:

"I have never known a cow, with soft, fur-like hair and mellow skin, appearing yellow and gummy at the roots of the hair when parted with the hands, that was not a good butter cow, and when fattened, would mix tallow well with flesh. Instead of heavy head, horns, neck and shoulders, and comparatively light hind quarters, which is characteristic of the opposite sex, she should show an opposite design, by a feminine countenance, light head, neck, and shoulders, widening backward from her chest to the loin and hind-quarters."

For the New England Farmer.

WHAT BUILDINGS ARE NECESSARY FOR A FARM OF ONE HUNDRED ACRES?

This is a standing question with the farmers of the country, and with your permission, I will give an outline plan of what I consider an appropriate block of buildings, with some notes upon the manufacture of manure for the cultivation of one hundred acres, and the restoration of an exhausted soil, to a state of primitive fertility.

The size and style of the house should correspond to the size of his family, and the taste of the farmer. Whether it be built high or low, I would so arrange the house as to bring the living-room to front the south and east, to secure the delightful influence of the sun in the room in the short days of winter; it promotes happy influences in the family, and cheers up the little birds and flowers, of which no house should be void. To extend this influence, I would build a bay window upon the south side of the room for the cultivation of flowers inside, with climbing roses upon the outside; say the Queen of Prairies on one side, and the Baltimore Belle upon the other; trained upon a neat little trellis to the roof, so as not to obscure the windows. This arrangement would unite pleasure and beauty to labor, one of the great ends of rural life, and which can only be attained by the union of these happy associations. It is folly to select the pleasantest room in the house to decorate and cultivate flowers in for your friends and neighbors when they call to see you, and consign the family to an obscure apartment as a necessity. Should you construct an ell to connect the house with the barn, be sure to not disarrange the above.

The barn should be 44 by 70, 18 feet posts, with a good cellar under the whole, for the manufacture of manure. For the latter purpose, haul together near the leanto door, a large heap of leaf mould from the forest, muck from the swamp, (keep a sufficient supply dug two years in advance,) leaves, straw, brakes, and other vegetable material for the filling of the trench behind the cows daily. In this trench commences the great work of redeeming an exhausted soil back to a state of normal fertility. In a barn of this size, we have a bay upon one side, the entire length, 14 feet wide; a driveway, 12; 1½ for crib in front of cows; leanto floor under cows, 5½, running back to the trench, with a descent of 2 inches, to carry off liquid manures into the trench; 5 for trench and walk behind the cows, and a space 6 feet wide, to be partitioned off into pens for calves, and hospitals for cows at calving. The trench should be 20 inches wide, and 5 deep, level, and running the entire length of the leanto. Cows may be tied by stanchions, or with straps and chains; I prefer the latter, as it gives them more opportunity to rest. Reserve at one end of the leanto as much room as is necessary for stables for horses—depending upon the number used or wanted upon the farm. Hogs should be kept upon the manure in the cellar, to prevent fire-fang, or heating by rapid decomposition. Several weeks before slaughtering for pork, the hogs should be removed to small, clean pens, as they will take on fat more readily than when left to roam at large, and work in the manure.

Every practical, observing tiller of the soil, well understands that no guano, superphosphate, or other nitrogenous, or highly concentrated manures, can restore to the soil the lost carbon, which has supplied a succession of crops with the essential materials which enter into the 14 elements of grain, fruit and grass. The true principle of agricultural science introduces another system, natural, plain, and altogether dissimilar. The forest must give up her store of carbon, (and she manufactures a large surplus annually,) so nicely elaborated by nature's laws as to fix its ammonia, and yet fitted for a powerful absorbent of liquid manures, with power to resist decomposition until brought in contact with the roots of plants. The swamps must yield up their store of vegetable wealth, the rich inorganic materials of surrounding hills and forests, to re-unite with the mineral salts too firmly fixed in the soil to be washed away by the annual rains. The organic laws of the universe established by the Creator, for the government of all the changes and formal conditions of properties of matter, whether in a crude mineral, organized or detached condition, are as uniform and unerring as the physical laws that govern the rising and setting of the sun. As the demand for carbon to form fat, muscle, cellular tissue, bone, brain, hair, and other portions of the human body, and at the same time keep up an animal heat of 98° night and day, is very great, we readily see why starch is so abundant in all plants used as food for man or beast. Starch contains a large amount of carbon, and the forests and swamps of the old States are holding the great bulk of carbon in store, to-day. We must increase the productiveness of rural labor by introducing into the present mode of farming more system in the science of vegetable physiology.

Every one knows that new land, land never subjected to cultivation, will produce, in abundance, all the crops which that country or district is susceptible of producing. Hence we are advised that the forests and swamps of any hilly country hold its vegetable wealth. Science now comes to our aid, and teaches us how to change a cold subsoil, into a warm, pliable, productive, surface soil. Practical experience has taught us that a good soil which produces 100 pounds of ripe wheat plants, loses but 15 pounds of its weight and substance by the operation, 85 pounds coming from the atmosphere. Science reveals to us why it is that in combustion, respiration and decomposition, an immense amount of organized matter is dissipated through the air—infused into the plants by atmospheric pressure, or gathered up by the falling dews, rains and snows, returned to the earth and the roots of plants, and thence by capillary attraction drawn into the kernel and elaborated as food for man and beast. It also gives the agriculturist power over heat, light, electricity, (positive and negative,) chemical action, air, earth and water, and enables him to grapple with repulsive elements—cold, subsoil water (corrected by drainage,) malaria, and other negative influences which have baffled the unskilful farmer for years past. Now that the soil, in the old States, has lost its natural productiveness, a thorough knowledge of vegetable science is indisputably necessary to enable the tiller of the soil to compete with those who till the rich fields of the virgin West.

A short time since a cargo of guano arrived in

New York, valued at $60,000. Here is sixty thousand dollars' worth of phosphorus and nitrogen, (ammonia,) which stands in the same relation to the soil as $60,000 worth of alcohol does to the tillers of the same, to stimulate them to more labor in changing the vegetable material around them into bread, meat and clothing. The soil should not be stimulated by phosphorus and ammonia, until it has been well supplied with all the inorganic elements necessary to furnish an increased amount of grain, any more than a man should drink alcohol upon an empty stomach. If a person will drink alcohol, drink it immediately after eating. Ground bones will furnish phosphorus, and copperas iron. The urine and hard excrements of the human species contain these forces in great abundance, and careless agriculturists are unaware of the enormous amount of these powerful fertilizers daily going to waste about the privies and slaughtering houses in large villages and cities. To make these more available, build a vat or cistern, immediately under one end of the cow-leanto, in the barn cellar, where they can be diluted in several times their bulk of water, and turned upon the manure-heap made as first mentioned. This collecting and compounding of carbonaceous and nitrogenous manures is *practically* agricultural science, and will supersede the necessity of purchasing commercial manures, at reckless prices, and rebut the charge that "farming is unprofitable." Add to this manure heap lime and ashes, and you have all the fourteen elements that enter into a kernel of wheat or corn.

LEWIS L. PIERCE.

East Jaffrey, N. H., Nov., 1859.

For the New England Farmer.

PRACTICAL PROOFS OF PROFIT IN FARMING.

MR. EDITOR:—I have noticed in your paper of late, discussions on "the Profits of Farming," by correspondents from different sections of the Commonwealth, in which they profess to give their own experience. Having no particular knowledge of these writers or their locations, I cannot judge of their statements. But I can tell you what I have witnessed in my own town, and will leave to you and your readers to judge whether or not farming is profitable here?

We have a neighborhood in which are situated thirty or more individuals, who own the lands they cultivate, say from five to twenty acres each, and so have owned them for twenty years or more. These men have convenient houses, with suitable buildings around, and families at home well cared for. Their only means of acquiring property is by the application of their industry to their land. Most of them have so managed as to lay up, besides maintaining themselves and their families, several hundred dollars a year. I cannot say how many hundred—because they are rather shy of informing the assessors on this point—but this I do know, there is no class of citizens among us more reliable than these cultivators of the soil.

We have others who branch out in manufactures, an trade—build large houses, and high work-shops—drive fast horses—and figure for a time as Directors of Banks, and they wind up with a per centage—some thirty, some fifty, and some nothing. Now, Sir, my conclusion is, that the culture of the soil, in these diggings, is the most profitable.

* * *

South Dawers, Dec. 10, 1859.

For the New England Farmer.

PREMIUMS FOR MONSTERS.

BY JUDGE FRENCH.

What is the object of agricultural societies in offering premiums? It is well, occasionally, to go back and try our conduct by first principles. We should offer these inducements with some definite and commendable aim. Because a thing has long been done is not conclusive evidence, especially in this new and changing country, that it should always be done. Many a proposition is admitted as conclusive that a slight examination may show to be powerless. There was good sense in the reply of the simple gentleman, in a novel of Dickens, to the suggestion that his room was too small, not large enough to swing a cat by the tail. "Why," said he, "I don't want to swing a cat by the tail."

If we go on to the grounds of a so-called cattle-show, the most prominent objects that meet our eyes may, probably, be a balloon, a military company, a half dozen fire-engines with their men, and a race-course. Among the lesser attractions, may be noticed tents with the fat woman and small boy, the two-headed calf, and the learned pig, while the cattle and such every-day affairs occupy modest and retired positions in the rear. All this makes a very attractive show for the factory girls, and the horse fanciers and the children, and brings money to our purse, which, to be sure, must somehow be had.

Whether it encourages or discourages the farmer, is not the question now to be discussed.

If we look at the premium lists, we shall find the stereotyped offer of a premium for the largest crop to the acre of Indian corn, the largest crop of oats, and so on. No conditions are imposed as to the quantity of manure to be used, or the amount of labor expended. The premium is for the man who shall by any means produce the greatest quantity to the acre.

Now there may be various objects in offering premiums. If it is thought advisable to encourage experiments in the culture of some new crop, as of silk, or of beets for sugar, it may be well to give premiums by way of bounty to help defray the cost of the first attempts, and thus afford means of deciding whether the particular product can be cultivated with advantage in the particular locality. And the same encouragement may be properly given to the introduction of new breeds of stock.

Again, in a new country, there may be advantage in testing the capacity of the soil and climate

to produce large crops. It may satisfy the doubtful new settler, to prove to him that a hundred bushels of corn may be made to grow on an acre of land. But of what advantage is it to a Massachusetts or New Hampshire farmer to have it proved for fifty years in succession, that one hundred bushels of corn or thereabouts may be grown on an acre? The *possibilities* have been shown again and again, and whether the extreme limit be ten bushels more or less, seems of no importance.

The legitimate object of premiums in our old societies is the promotion of good husbandry. The true idea of good husbandry is the increasing the permanent income of our farms. It is not good husbandry to raise an enormous crop upon one acre, at an extravagant outlay of manure and labor. It is not good husbandry to produce a large crop for a single year, by a process exhausting to the soil. Good husbandry implies a system which may be permanent, a system which shall, through a whole rotation, through a series of years, produce crops sufficient to repay labor and the interest of capital, without depreciating the land.

We are speaking now of the old States. In new States good husbandry may be quite another matter. It certainly must be good husbandry for the pioneer to keep off starvation, and so to get his first crops with the least labor, even at the expense of his soil. He frequently borrows his purchase money, and must pay off the mortgage in two or three years, or lose his land; and if, in so doing, he plunders his soil, and sends away to market its elements of fertility in the shape of wheat and corn, he has a good excuse for his course.

This, however, is not, in fact, husbandry, good or bad. It is rather *mining*—digging up and selling the wealth which Nature has buried in the earth. Our forefathers have thoroughly performed this operation over most of New England. They took what the natural fertility of the soil, enriched by the ashes of the noble forests, could give them, and bequeathed to us the old heritage of bread for labor.

Is it not time to inquire for what purpose do we continue annually to offer and pay these premiums for monster crops of our standard grains from a single acre? Is it not a waste of money, and often worse? Do we know that the acre was, on the whole, judiciously cultivated? Do we inquire whether the rest of the farm was robbed, to manure this premium crop? Should not the award be to him who shows the best average of crops for a year, or for a series of years? Or to him who shows the largest profit, on the whole, of his farm accounts?

How is it as to animals? Is it really useful to encourage a breed of horses for the race-course or the trotting-course? Is the horse that can trot "inside of 2.40" usually a valuable horse for any service? It may be profitable to produce enough of such horses to supply the demand of the "fancy" men who have money to throw away for the gratification of a low taste, but a 2.40 horse is a monster, not a regular product.

Some societies offer premiums for the *quickest* and best plowing by oxen, of a given tract. Now every farmer knows that oxen may be driven to plow a quarter acre, in much less than half the time they can be properly or profitably made to do the same work. You might as well award the premium to those which should walk farthest on their hind legs, as for this unnatural speed.

Again, we offer prizes often for animals and crops known to be unsuited to the locality. It would not promote good husbandry to award a premium for the best elephant or the best crop of cotton grown in New England. If the prize were large enough, Barnum, or somebody else, would carry it away in great triumph. Clearly we should not encourage by premiums the production of animals or crops unsuited to our soil and climate. When we become satisfied that a mode of culture of a given crop is and must be, unprofitable, let us drop the premium for it from our list. If, for instance, we are convinced that cranberries cannot be profitably cultivated on upland, let us discourage and not encourage the attempt. Perhaps that experiment has not been often enough repeated. By all means encourage its repetition, till the question is fairly settled.

These hints are thrown out to set other men thinking on the subject.

The principles upon which premium lists should be constructed in our old States are plain. They are—

1st. To encourage the product of crops and animals, of kinds and by methods which will prove profitable in the long run.

2. To encourage experiments in new products and methods, until reliable conclusions may be formed, and no longer.

3. To encourage exhibitions that shall tend to dignify agriculture in all its departments.

AN APPLE TREE at Woodside, San Mateo county, California, is described as follows: Height of tree from the ground to topmost limb, 10 feet 6 inches; circumference of trunk (two feet from the ground,) 6¾ inches; 269 apples on the tree at pres ent, some 15 or 20 having fallen off. A fair av erage of the circumference of the apples is 9¾ inches. On another tree, one apple measured 14 inches round.—*California Farmer.*

HOW TO CATCH RATS.—Rats are not the onl species of tenants that outwit their landlords, they will sometimes shun all baits and traps. As many modes of getting rid of them cause them to

die on the premises, and taint the atmosphere, or are dangerous to human life, it may be well to remember that if the centre of a cage is sprinkled with a few drops of the oil of rhodium, (a species of convolvulus from the Canary Isles, fifty pounds of the root of which yield one pound of the essential oil, according to Lindley,) multitudes are irresistibly attracted to the spot, to be disposed of at will.—*Hall's Journal of Health.*

JIMMY'S WOOING.

The wind came blowing out of the west,
And Jimmy mowed the hay;
The wind came blowing out of the west—
It stirred the green leaves out of their rest,
And rocked the blue-bird, up in his nest,
And Jimmy mowed the hay.

The swallows skimmed along the ground,
And Jimmy mowed the hay;
The swallows skimmed along the ground,
And rustling leaves made pleasant sound,
Like children babbling all around—
As Jimmy mowed the hay.

Milly came with her bucket by,
As Jimmy mowed the hay;
Milly came with her bucket by,
With her light foot so trim and sly,
And sunburnt cheek, and laughing eye—
And Jimmy mowed the hay.

A rustic Ruth in linsey gown—
And Jimmy mowed the hay;
A rustic Ruth in linsey gown,
He watched her soft cheeks, changing brown
And the long, dark lash that trembled down,
Whenever he looked that way.

O! Milly's heart was good as gold—
And Jimmy mowed the hay;
O! Milly's heart was good as gold—
But Jimmy thought her shy and cold,
And more he thought than ere he told—
As Jimmy mowed the hay.

The rain came pattering down amain,
And Jimmy mowed the hay:
The rain came pattering down amain,
And under the thatch of the laden train,
Jimmy and Milly a cunning twain,
Sat sheltered by the hay.

The merry rain-drops hurried in,
Under the thatch of hay;
The merry rain-drops hurried in,
And laughed and pattered in a din,
Over that which they saw within,
Under the thatch of hay.

For Milly nestled to Jimmy's breast,
Under the thatch of hay;
For Milly nestled to Jimmy's breast
Like a wild bird fluttering to its nest—
And then I'll swear she looked her best,
Under the thatch of hay.

And when the sun came laughing out,
Over the ruined hay;
And when the sun came laughing out,
Milly had ceased to pet and pout,
And twittering birds began to shout,
As if for a wedding day.

PHOTOGRAPHING ON WOOD.—The power to secure a likeness of a person, animal, landscape, fruit or machine, upon an engraver's block, in an instant, without the tedious process of pencil and crayon, has at last been accomplished. It has cost nearly as much to get the animal or article drawn upon the block, as to engrave it afterward. This is no longer the case. Any artist with a camera can now transfer a likeness to the wood prepared by a process recently invented and patented by R. Price, of New York city. It will be of great service to all classes having machinery, buildings or animals, which they desire engraved. There can no inaccuracy result. A prepared block of the size desired can be forwarded to any daguerrean artist, and he can take a photograph after the animal or implement upon the block, which, returned to the engraver, insures an accurate representation of said article or animal.

NEW PUBLICATIONS.

GRASSES AND FORAGE PLANTS. A Practical Treatise, comprising their Natural History; Comparative Nutritive Value; Methods of Cultivating, Cutting and Curing; and the Management of Grass Lands in the United States and British Provinces. By CHARLES L. FLINT, Secretary of the Massachusetts State Board of Agriculture. Fourth edition, with one hundred and seventy Illustrations. Boston.

We have spoken favorably of this work before; the copy before us is one of a new edition, revised and enlarged, and beautifully printed. It is a valuable work, and ought to be owned by every farmer who means to make progress in his profession, and get his crops at a profit.

SMITHSONIAN REPORT FOR 1858.—This volume contains 438 pages, mostly made up of scientific matter. The articles are:—Lectures on Astronomy; Memoir of Priestley; the Grasshoppers and Locusts of America; the Means of Destroying the Grasshopper; Vegetable Colonization of the British Isles of Shetland, Faroe and Iceland; on the Causes which limit Vegetable Species towards the North, in Europe, and similar regions; on the Distribution of the Forest Trees of North America; List of Birds of Nova Scotia; List of Birds of Bermuda; Report on Atmospheric Electricity. There are several minor articles of interest. The work is printed in Government style, and is altogether too mean a dress in which to clothe the productions of some of our most learned and useful men. If the power that controls this matter will send the manuscripts to Boston, they can be printed in a style that certainly will not be a reproach to the nation, for about one-half what such printing usually costs in Washington.

GREENE COUNTY, N. Y., AGRICULTURAL SOCIETY.—Before us we have the Address of the Rev. HENRY J. FOX, before this Society, in September last. His topic was, "Agriculture as a *Necessity*, as an *Amusement*, and as an *Art*," and he handled it well. Clergymen are our esteemed and valuable co-laborers in the great Art, and we feel under personal obligations to them for their timely and sound teachings. This address is an especially good one, and ought to be read everywhere.

LADIES' DEPARTMENT.

STALE BREAD, AND WHAT IT IS.

I don't like very stale bread—do you? My reason for disliking it is very much like the reason why I don't like Dr. Fell; your reason is really the same, but you probably cheat yourself into the belief that it is something else, namely, because the bread is so dry. Allow me to undeceive you. No bread is dry; bread just baked is nearly half water; and the stalest of stale loaves has not lost more than a hundredth part of this water.

The fact that bread contains nearly half its weight of water is surprising; but not so surprising as that your body contains a considerably larger portion—nearly three-fourths. It is "water, water everywhere, and (often) not a drop to drink." The flour from which bread is made, is dry enough, containing not more than sixteen per cent. of water; but it has a great tendency to absorb water, and in the process of baking it, absorbs it rapidly. The gum, which is produced from the starch of the flour in baking, holds this water firmly, and the gluten which forms a coating round every little hollow in the bread, steadily resists evaporation. Thus bread becomes moist and keeps moist, let it be never so stale.

But if stale bread be not dry bread, what is it? What makes that familiar difference between the soft, plastic, spongy crumb, and the harsh, crumbling morsel of six days old? That it is no difference of moisture has been experimentally verified; every cook or baker could have told us that there is no use in placing bread in a moist cellar to prevent the evaporation of its water, since the bread will assuredly become stale as the hours roll on. On the other hand, every baker and every cook could tell us, that if a stale loaf be placed in the oven again for a few minutes, it will come out having (for a time at least) all the characters of new bread. Yet in the oven it must necessarily have lost some of its water, and comes out dryer than it went in—dryer, but not by any means so stale. Further: who does not know the effect of toasting a slice of stale bread? The fire scorches the outside layers, and renders them completely dry, but, especially, if the slice be not too thin, we find the interior layers deliciously soft, plastic and palatable.

An experiment made by the eminent French chemist, M. Boussingault, proves in a convincing manner, that the amount of water in the bread has nothing to do with its newness. He took a loaf six days old, weighing three kilogrammes, 690 grammes, (a kilogramme is something more than two pounds, a gramme is about 15½ grains.) The loaf was placed in the oven for an hour; on removing it, a loss of 120 grammes of water was found to have taken place; yet, in spite of this loss, amounting to three-fourths per cent., the bread was as new as that just made.

It is the water in the bread which prevents the loaf becoming all crust. In an oven with a temperature of 500 degrees Fahrenheit, the loaf gets roasted outside, and the crust is formed; but the inside crumb never has a temperature above 100 degrees; the water which is there, and which cannot evaporate through the crust, keeping the temperature down. If this crumb is thus slow to heat, it is also slow to cool. Every one knows how long the crumb of a roll continues warm, even on a cold winter morning; and the loaf which was taken from the oven at three in the morning, comes warm to the breakfast table at ten. He placed a loaf, hot from the oven, in a room, the temperature of which was 66 degrees. The law of equilibrium, by which a hot body loses heat until it is no hotter than the surrounding objects, instantly came into operation; but, although all bodies give off their heat to bodies that are colder, they do so with varying degrees of rapidity—some being very tenacious of the heat they have got hold of, and others being the most prodigal of spendthrifts; and thus the loaf, although it began to cool as soon as taken from the oven, did not reach the temperature of the surrounding air till twenty-four hours had elapsed—and then it was stale.

Does it not seem, then, that the difference between new bread and stale bread is only the difference between hot bread and cold bread? It does seem so, when we reflect that we have only to warm the stale bread in an oven to make it new again. But there is this fact which stands in the way of such an explanation; the bread which has been re-baked, although undistinguishable from bread which has been recently baked, is only so for a short time—it rapidly becomes stale again. Were this not the case, we need never have to complain of stale bread; it could always be made new again in a few minutes. The conclusion drawn by M. Boussingault from his experiments is that the staleness depends on a peculiar molecular condition of the bread; and this condition is itself dependent on a fall of temperature.

But new bread, if more palatable, is very unwholesome, because very indigestible to those whose peptics are imperfect. The peculiarity of new bread, that it forms itself into a paste, is an obstacle to its digestion. But this is only true of the lumpish, pasty, doughy, obstinate, irrational bread baked in our favored island. No dyspeptic trembles at the new bread of Paris or Vienna. In Vienna they bake—or used to bake when I lived there—three times a day, and perfectly fresh rolls were served up with each meal. No one complained; every one ate those rolls so alarming to the dyspeptic mind, and would have stormed at an unhappy waiter who should by accident, or philanthrophy, have brought yesterday's roll. But let the weak and strong beware how they trifle with the new half quartern, which, in unshapely, uninviting, and well founded modesty, stands on the breakfast table of the British mother. The hot bread may tempt her inconsiderate boy—perhaps the more so because he is assured it is "bad for him." Boys have a very natural suspicion, founded on ample experience, that what parents and guardians declare to be "good for them," is certain to be odious. They are birched for their good, they are bloussed for their good, they are hurried off to bed for their good, and of course they like to try the bad, because it isn't for their good. But, except these young gentlemen, no one with a stomach more delicate than that of a plowman or a fox hunter should venture on hot bread in England. —*Once a Week.*

☞ A French writer says that the greatest blessing a woman can receive on earth is the continuance of the affection of her husband after marriage.